

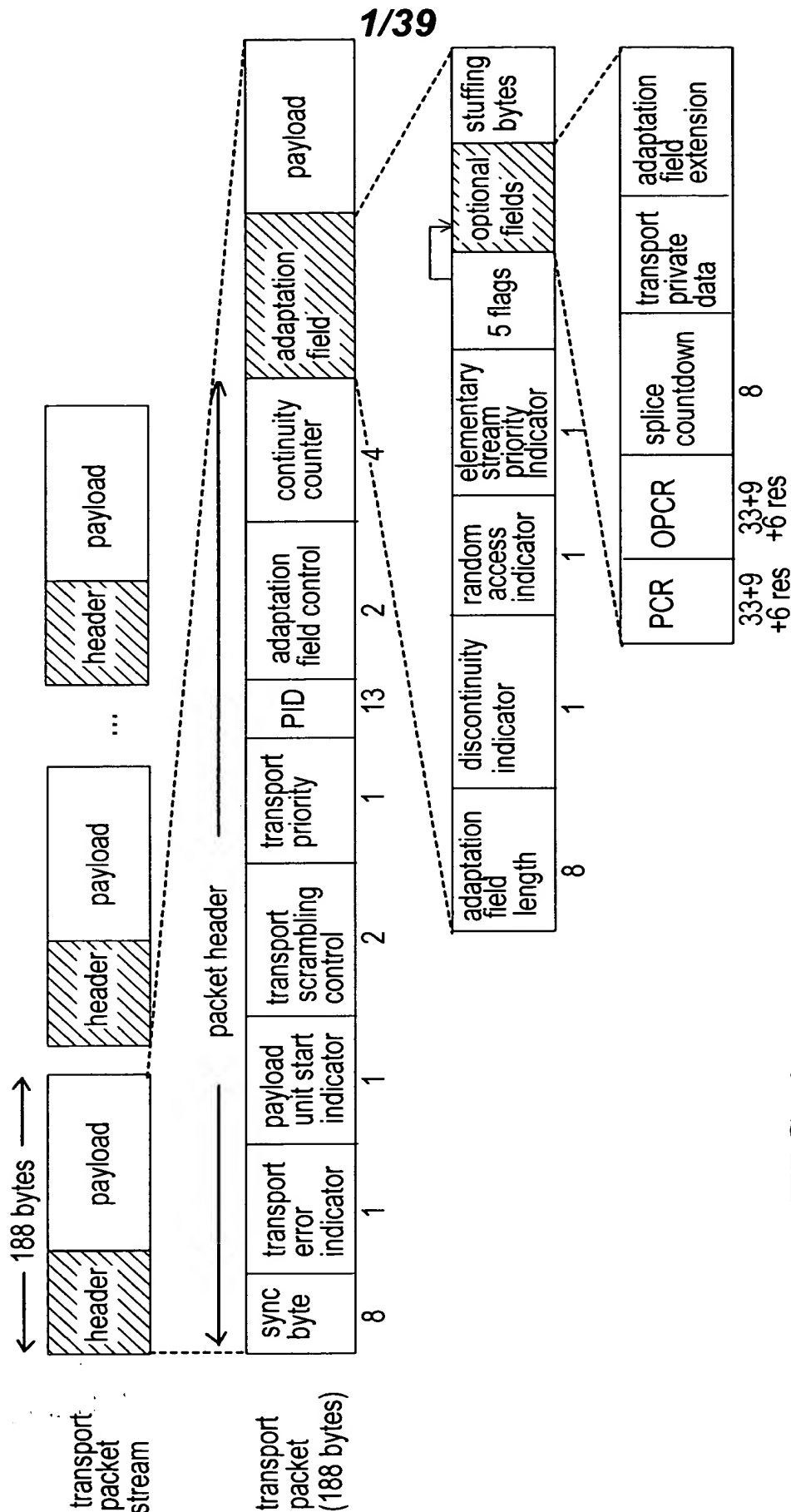
**Drawing Amendments:**

The attached 39 sheets of drawings include changes to FIGs. 1-43 correcting various informalities identified during the prosecution of the related cases. No new matter has been introduced. These sheets replace the original sheets including FIGs. 1-43.



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Attorney: J. Gustav Larson (512 327-5515)



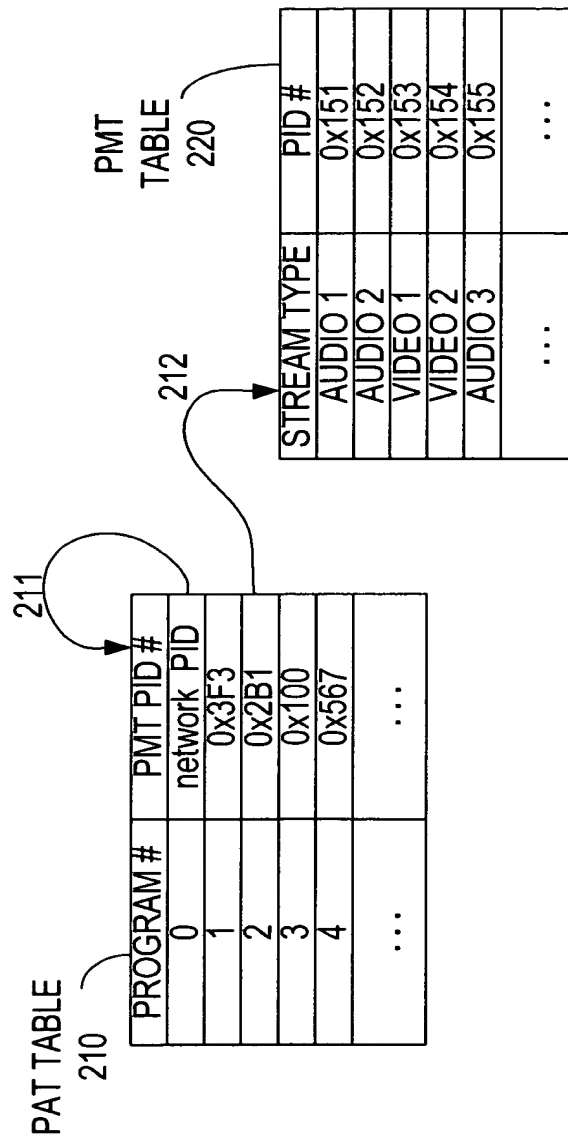
**FIG. 1**  
**--PRIOR ART--**



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**FIG. 2**  
**--PRIOR ART--**

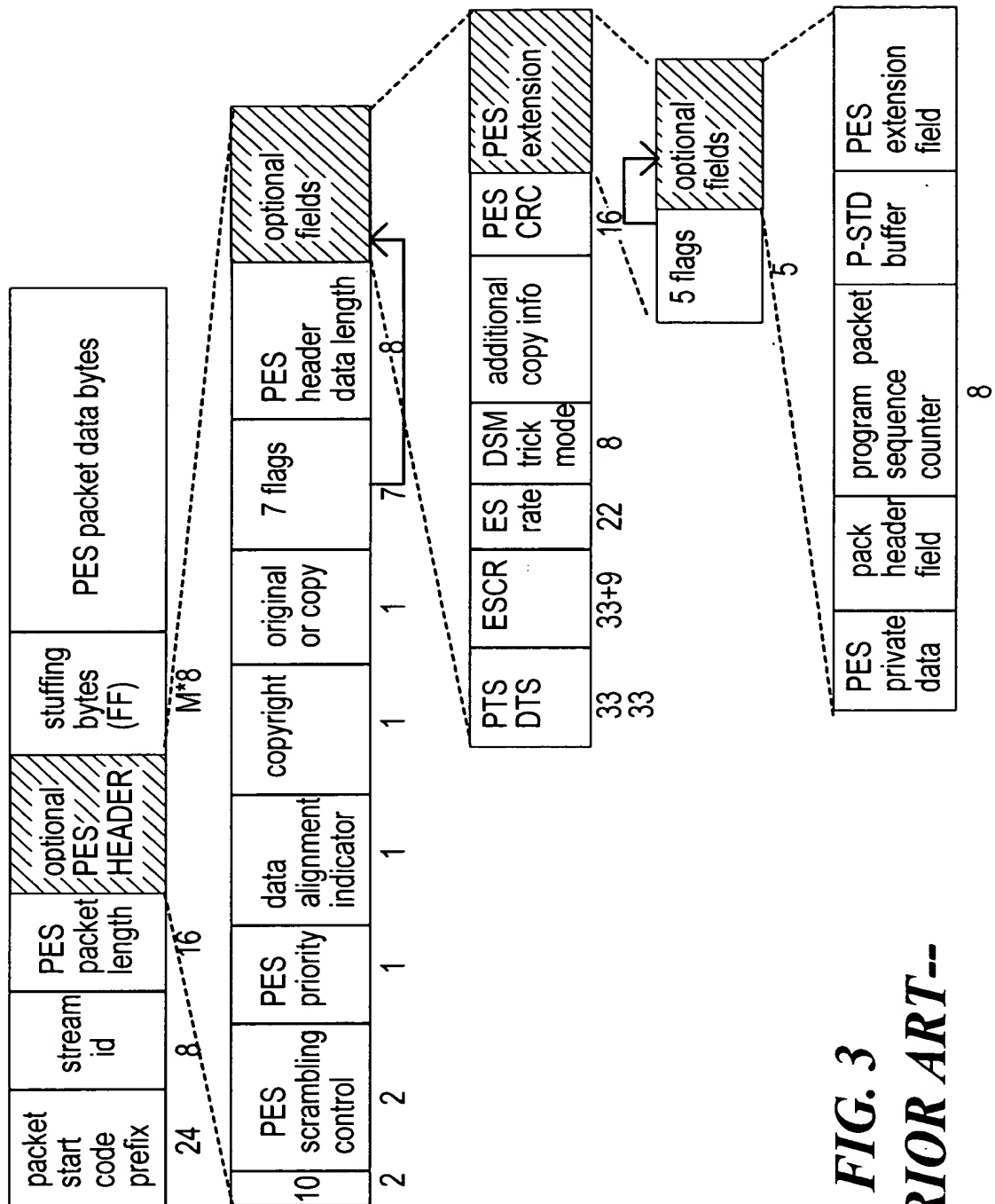
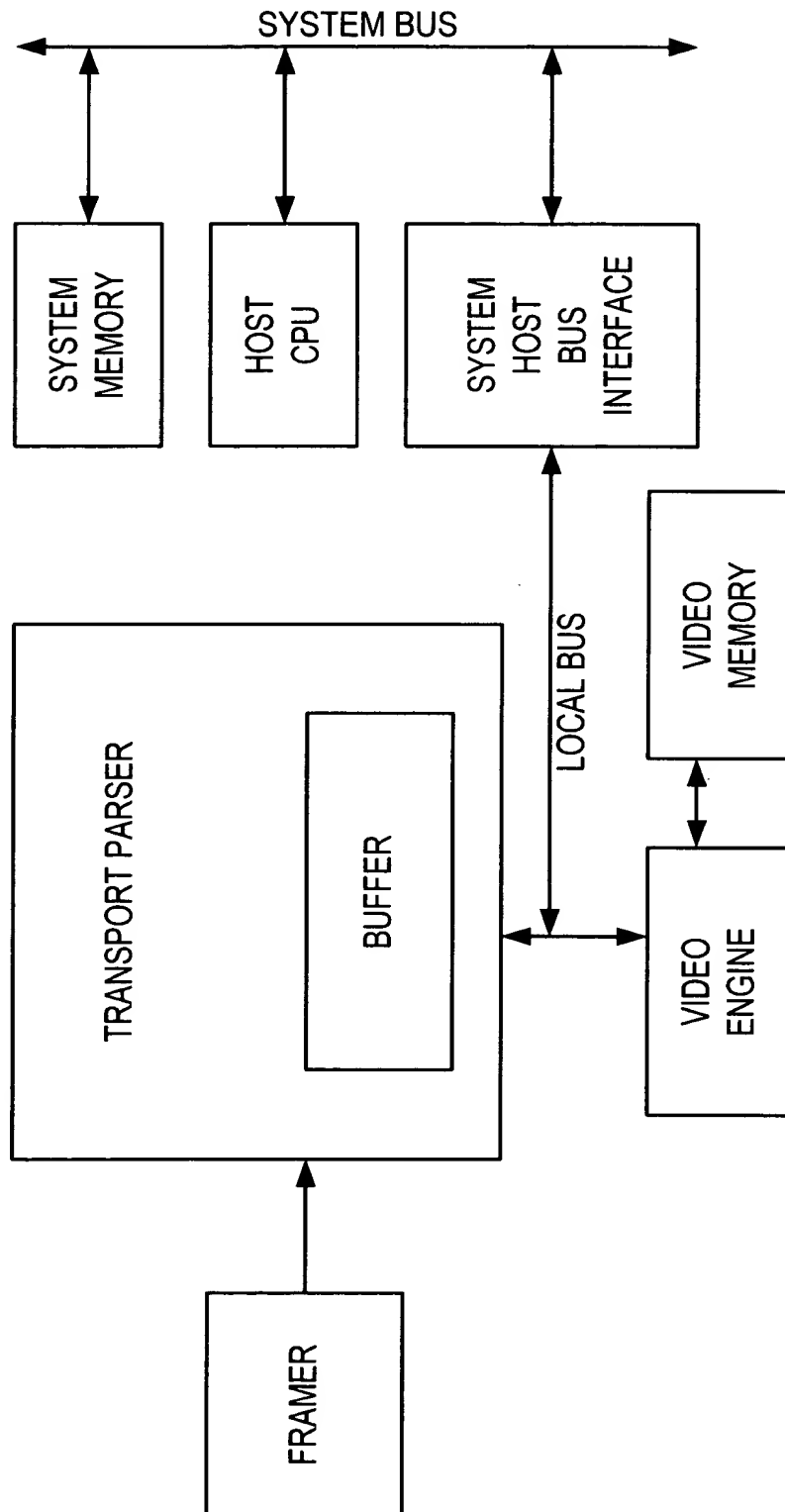


FIG. 3  
--PRIOR ART--



**FIG. 4**  
**--PRIOR ART--**



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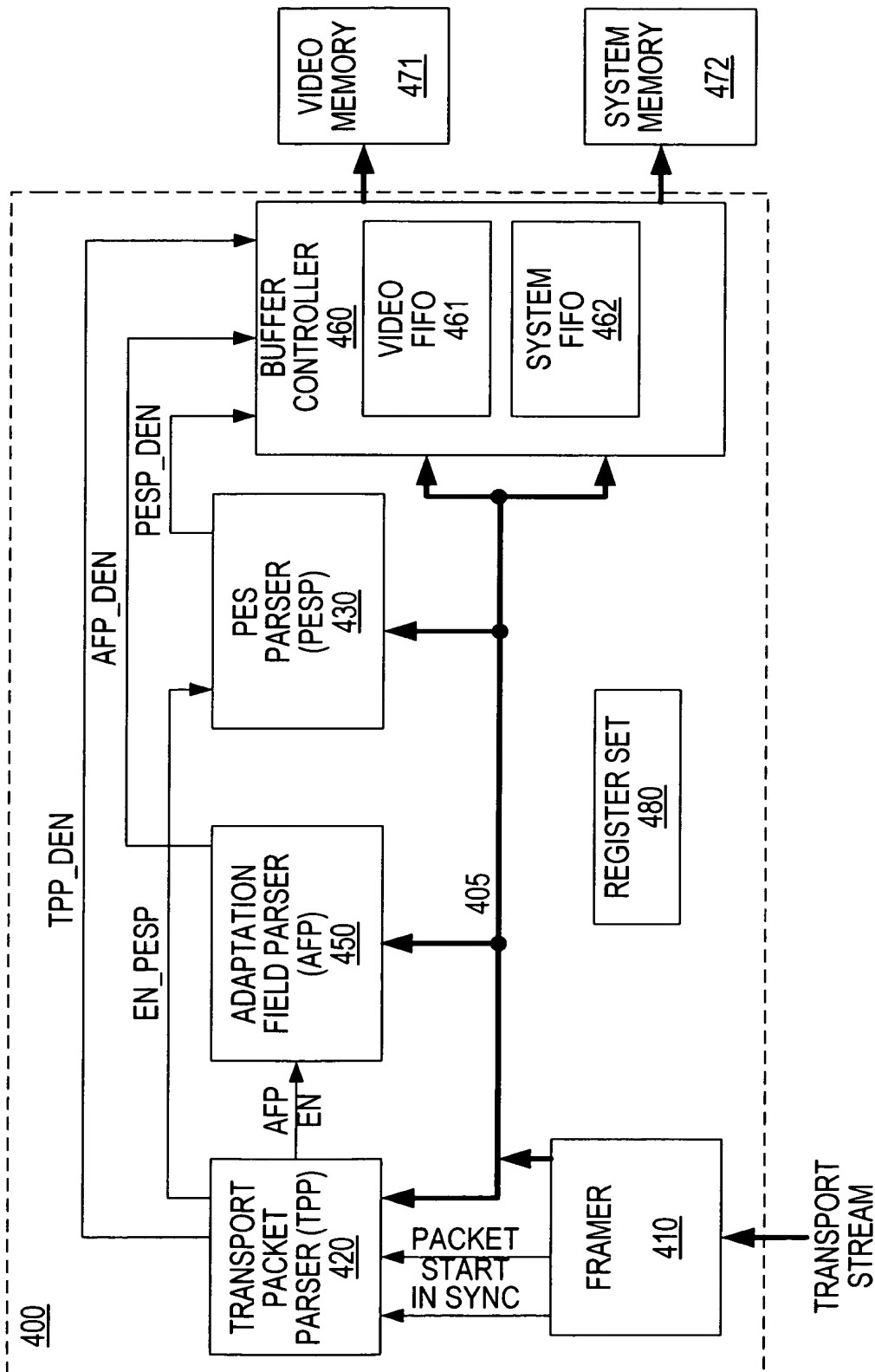


FIG. 5

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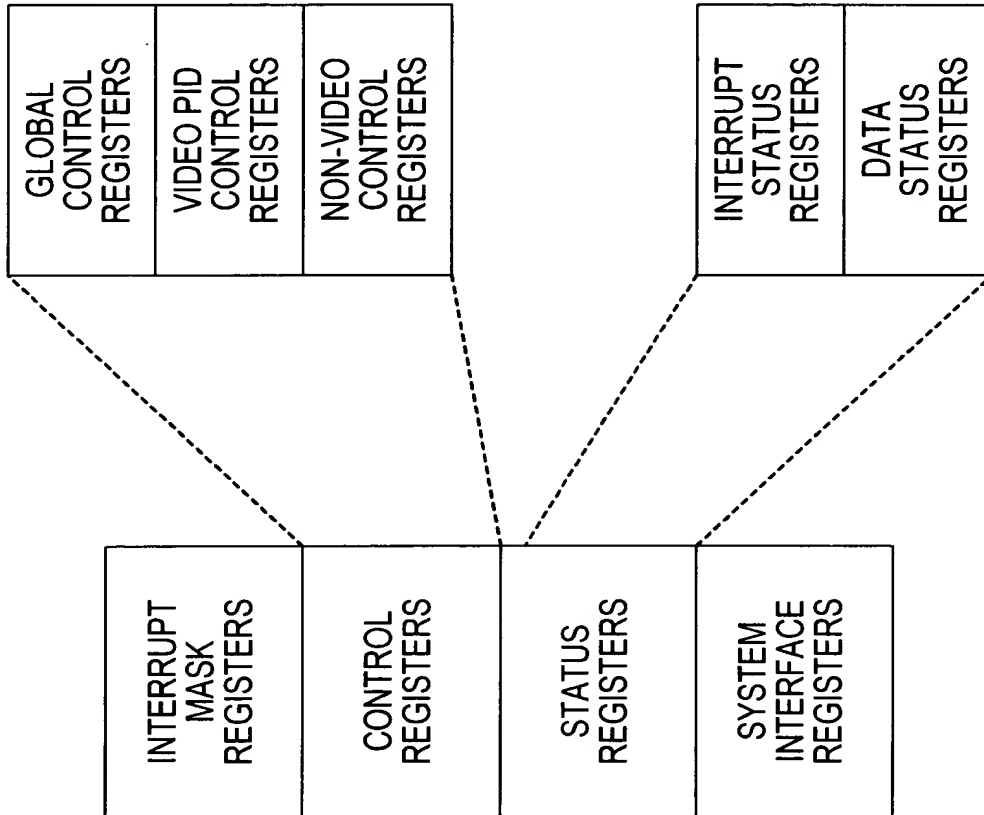
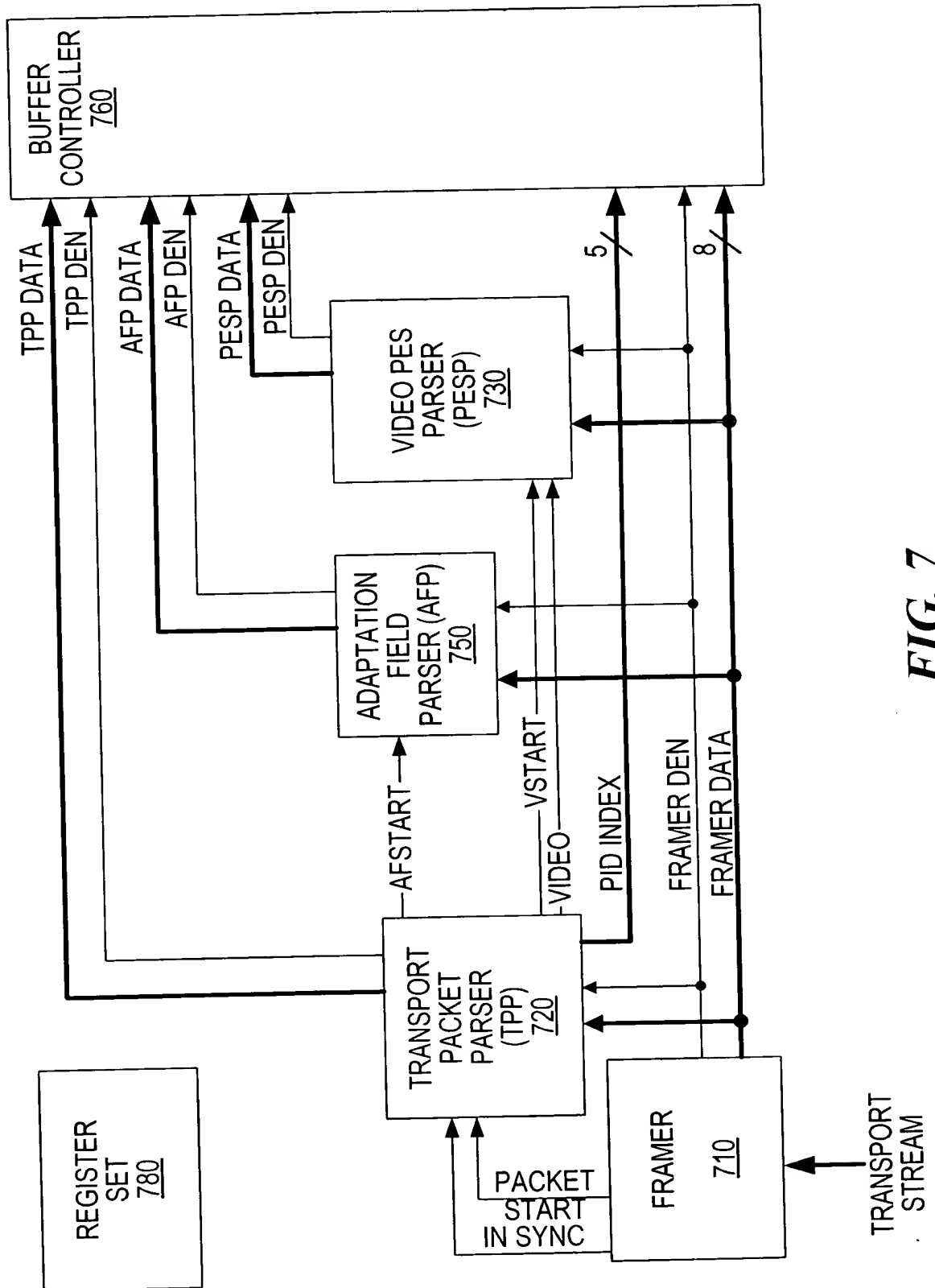


FIG. 6





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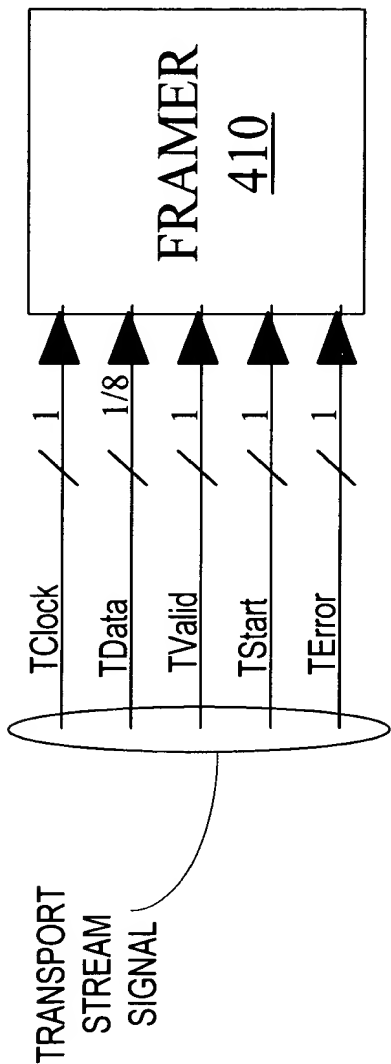


FIG. 8

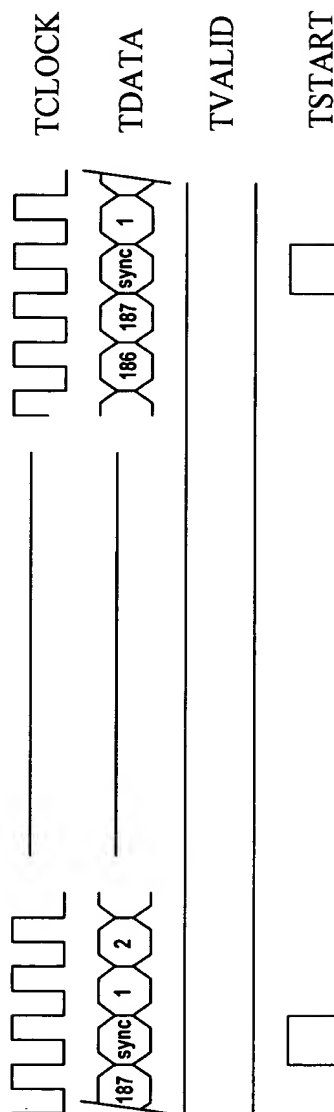


FIG. 9

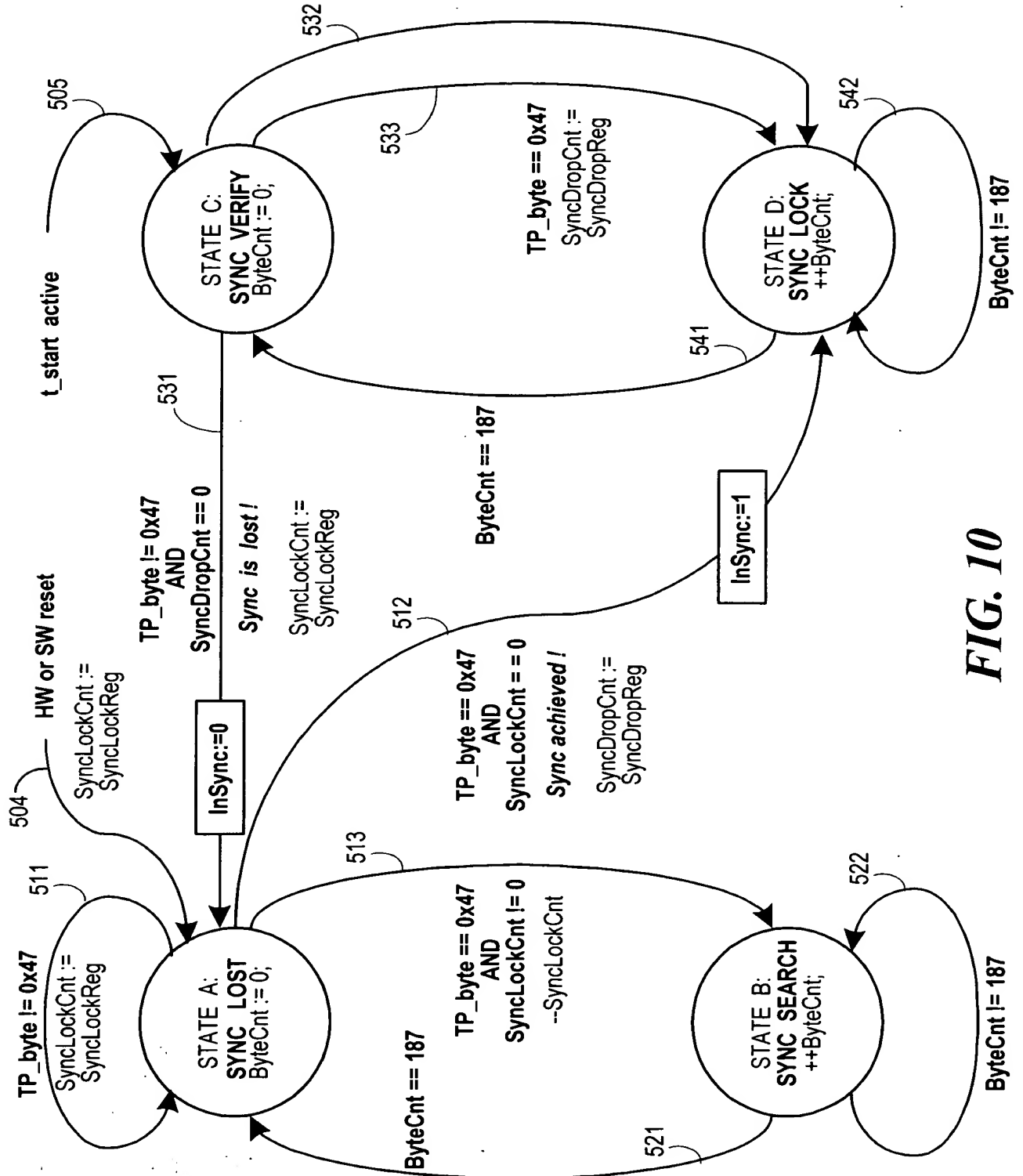
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TP\_byte != 0x47  
AND  
SyncDropCnt != 0  
--SyncDropCnt

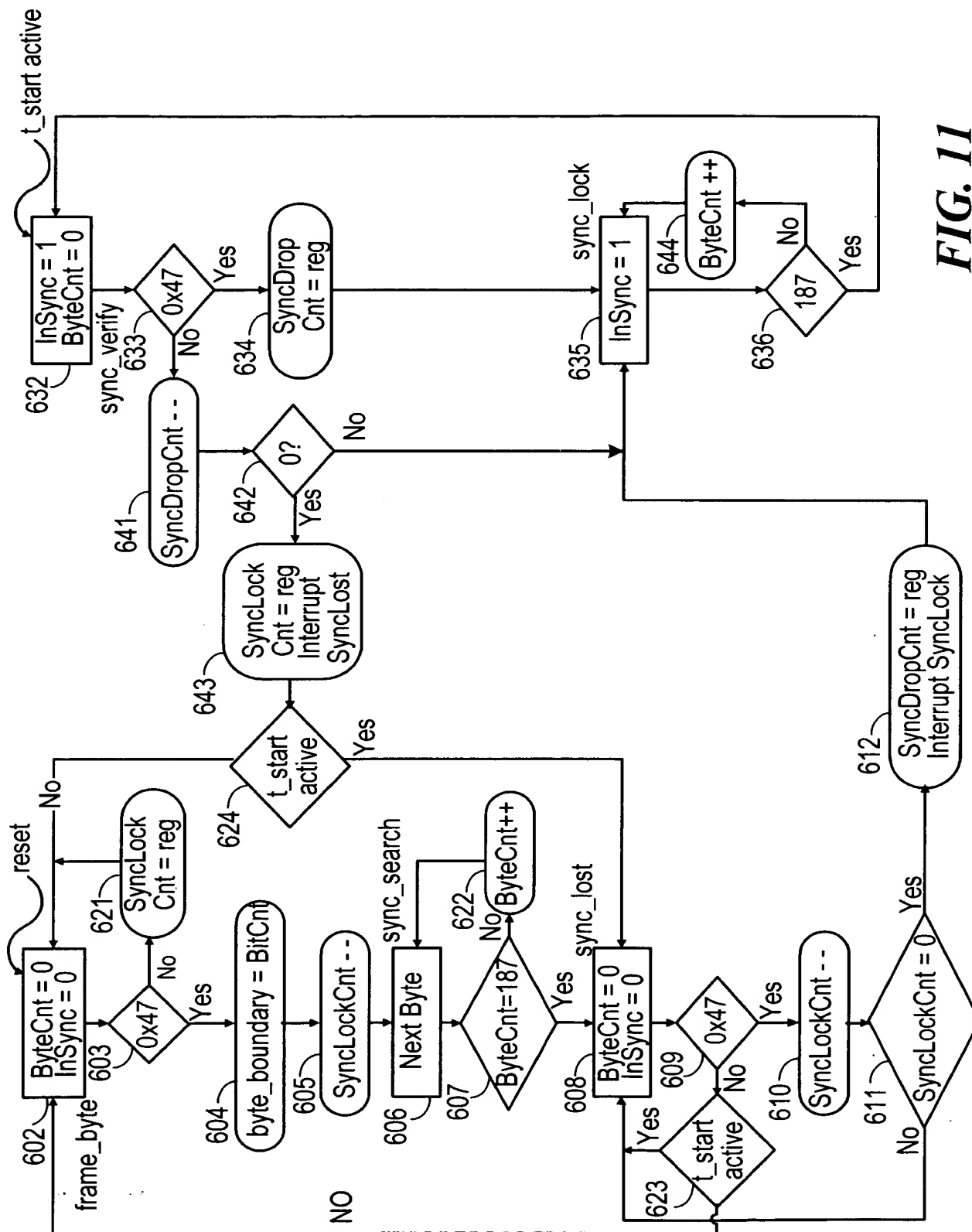




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Transport Demultiplexer Global Status Register				Description
Field Name	Bits	Len	Type	
FramerSyncLock	0	[ 1]	R/W	This bit is set to '1' after the frame synchronization has been acquired. <b>WR_ACC_CLEAR.</b>
FramerSyncDrop	1	[ 1]	R/W	This bit is set to '1' after the frame synchronization has been lost. <b>WR_ACC_CLEAR.</b>
CurrentFramerState	20-22	[ 3]	R	<p>This 3 bit field codes the current state of the framer:</p> <p>'000' – Capturing a byte</p> <p>'001' – Out of TP frame synchronization</p> <p>'010' – Searching for synchronization</p> <p>'011' – Checking for synchronization</p> <p>'100' – In the TP frame synchronization</p> <p>NOTE: Only a framer state machine updates this field. Write access does not modify it.</p>
UnusedField	29-31	[ 3]	R/W	Unused and reserved field.

**FIG. 12**

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Transport Demultiplexer Interrupt Mask Register				
Field Name	Bits	Len	Default	Type Description
EventInterruptMask	0-18	[19]	0	R/W If set to '1' enables local sources of interrupts.  Bit 0 – FramerSyncLock Bit 1 – FramerSyncDrop  Bits 2 – 19 Other Functionality
EnableGlobalDemuxInterrupt	20	[1]	0	R/W If set to '1' enables globally TD core interrupts.
UnusedField	21-31	[11]	0	R/W Unused and reserved field. Always set to 0.

FIG. 13

# REPLACEMENT DRAWING

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Transport Demultiplexer Global Control Register				
Field Name	Bits	Len	Default	Type
FramerSyncLockLength	0-4	[ 5]	00101	R/W
Description				
Five bits field to select a number of consecutive transport packets after MPEG-2 frame (bit-stream) synchronization is declared.				
FramerSyncDropLength	5-7	[ 3]	011	R/W
Description				
Three bits field to select a number of consecutive transport packets after a loss of MPEG-2 frame synchronization is declared.				
FramerBitPolarity	8	[ 1]	0	R/W
Description				
'0' selects msb first (default mode), '1' select lsb first				
FramerClockPolarity	9	[ 1]	0	R/W
Description				
If set to '0' framer will latch on falling edge (default) If set to '1' framer will latch on rising edge.				
FramerMode:	10-11	[ 2]	'00'	R/W
Description				
Defines a combination of external control signals: '00' – Framer uses T_start only. '01' – Framer uses T_valid only. '10' – Framer uses T_start and T_valid. '11' – Framer uses T_clock and T_data only.				
Other functionality (not relevant to Framer)				
Other Functionality Bits	12-15	[ 4]		
T_ValidPolarity	16	[ 1]	1	R/W
T_StartPolarity	17	[ 1]	1	R/W
T_ErrorPolarity	18	[ 1]	1	R/W
Description				
'1' selects active high [5V] for t_start external signal '1' selects active high [5V] for t_error external signal				
Other Functionality Bits	19-28	[ 10]		
Description				
Other functionality (not relevant to Framer)				
UnusedField	29-31	[ 3]	0	R/W
Description				
Unused and reserved field. Always set to 0.				

FIG. 14

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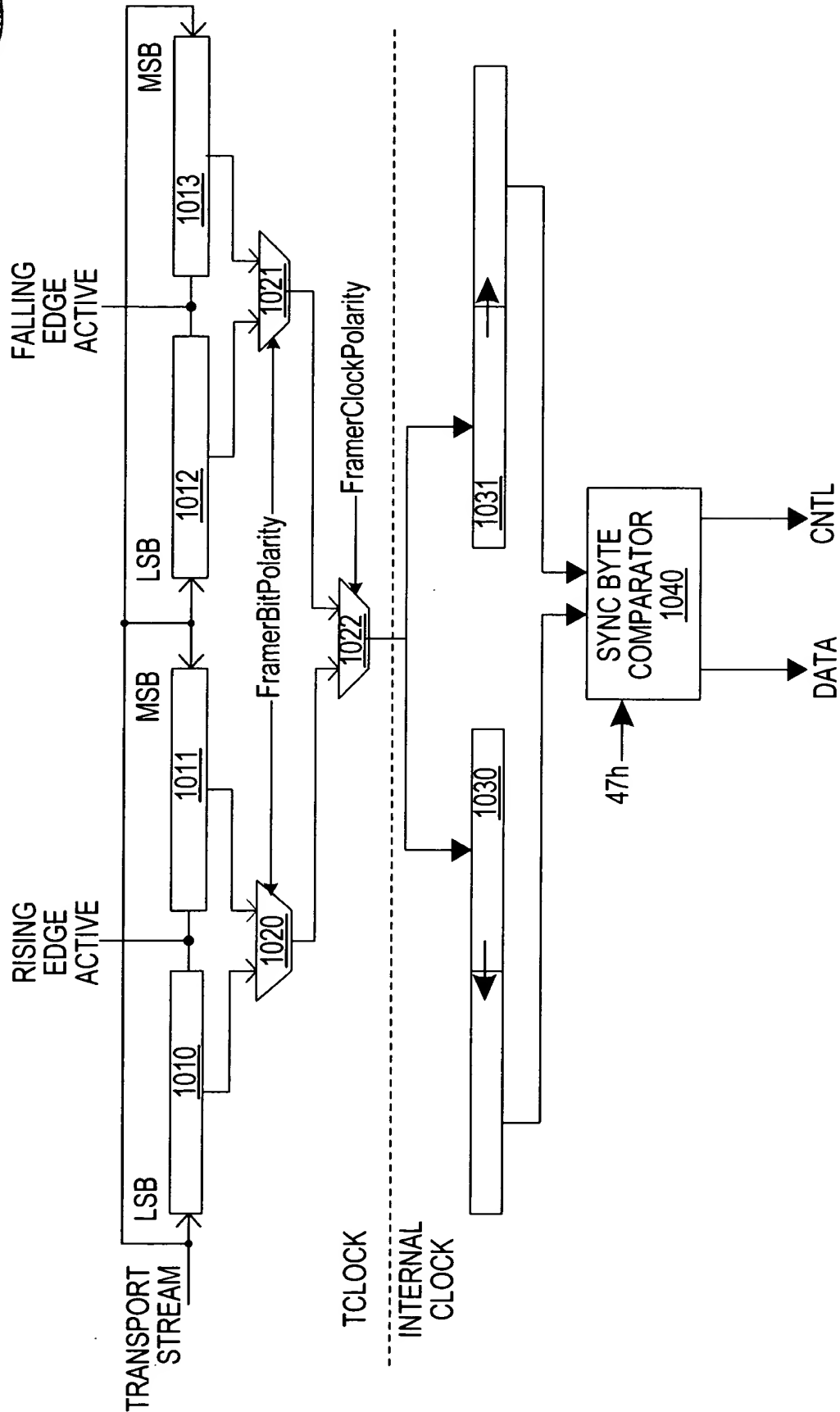
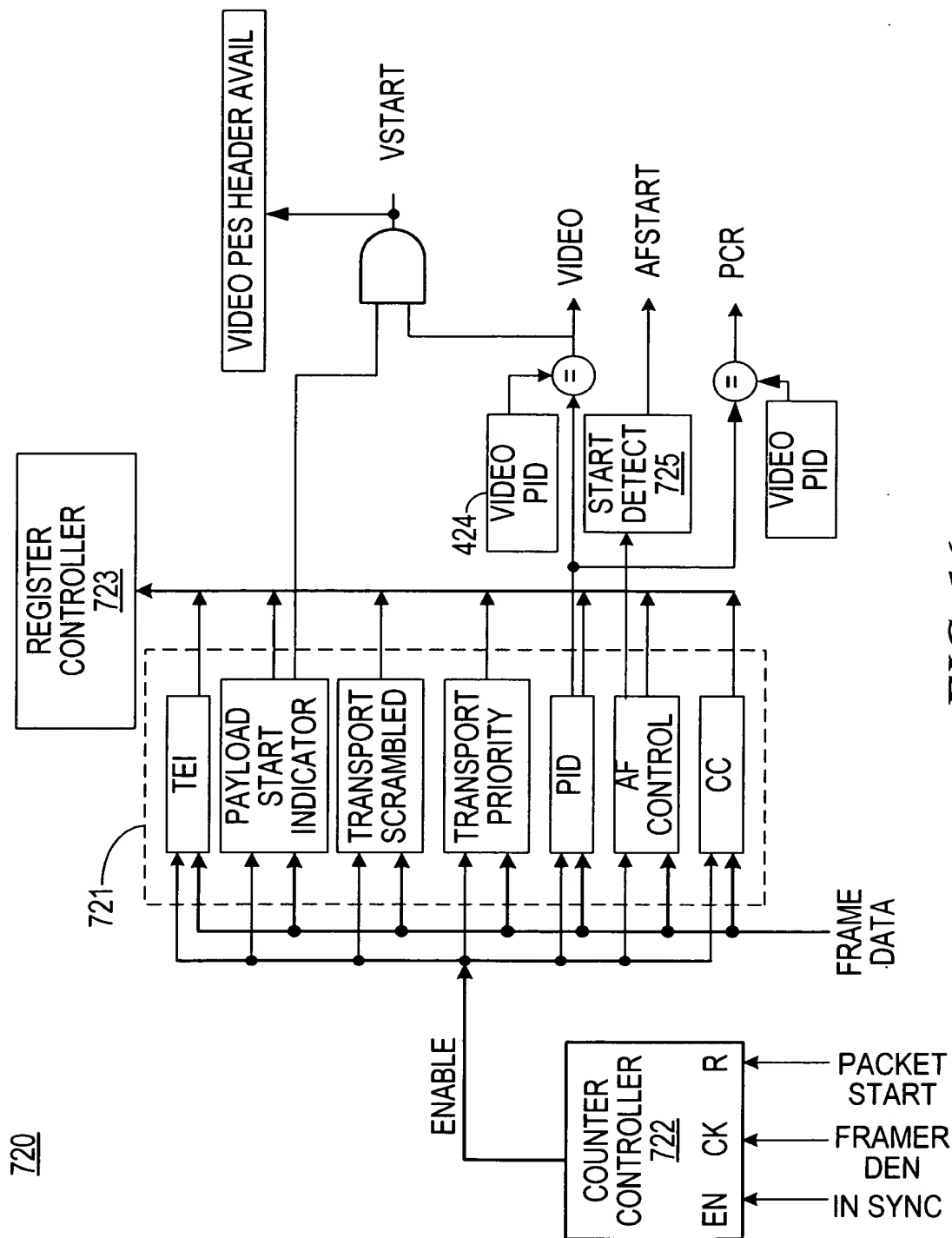


FIG. 15



**FIG. 16**





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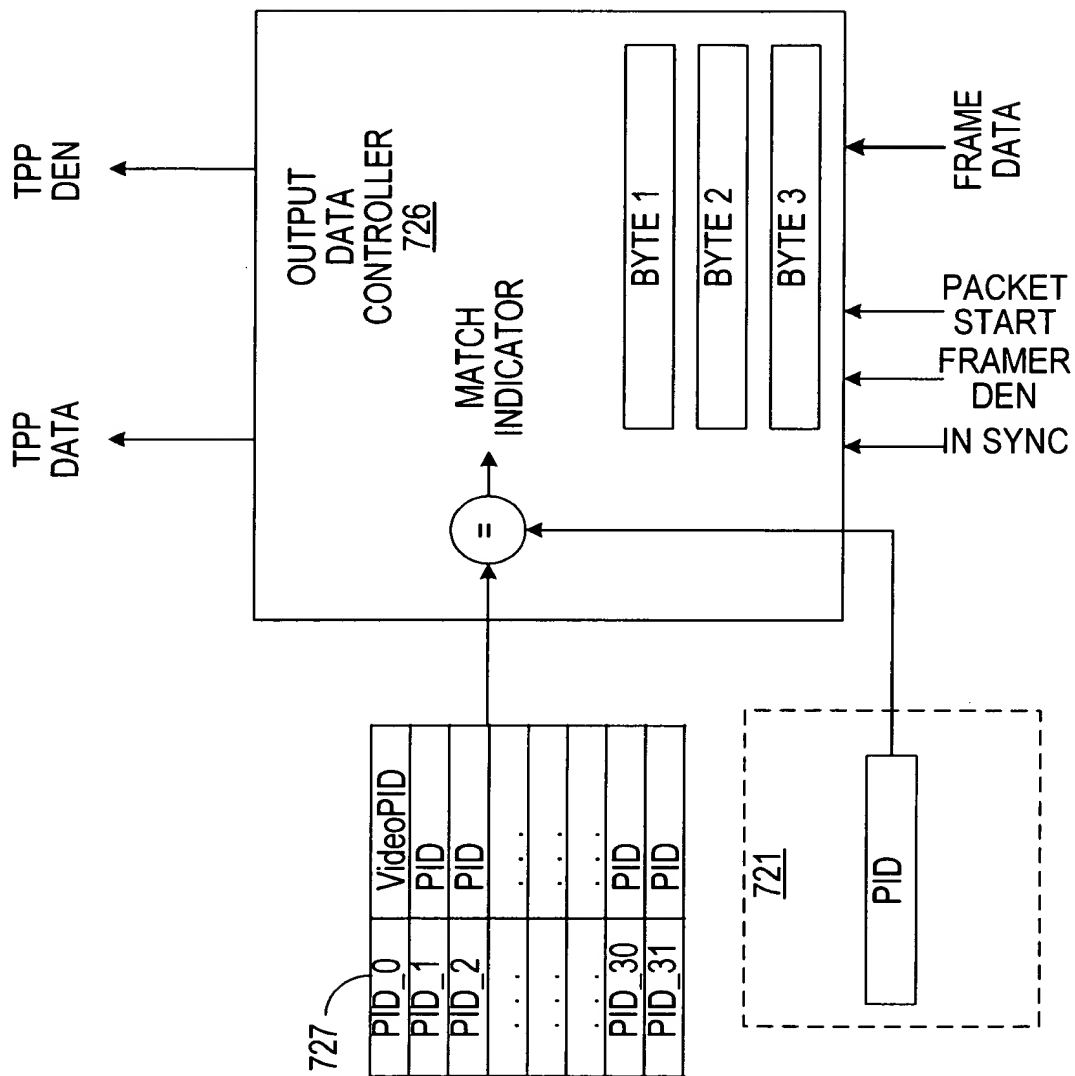


FIG. 17



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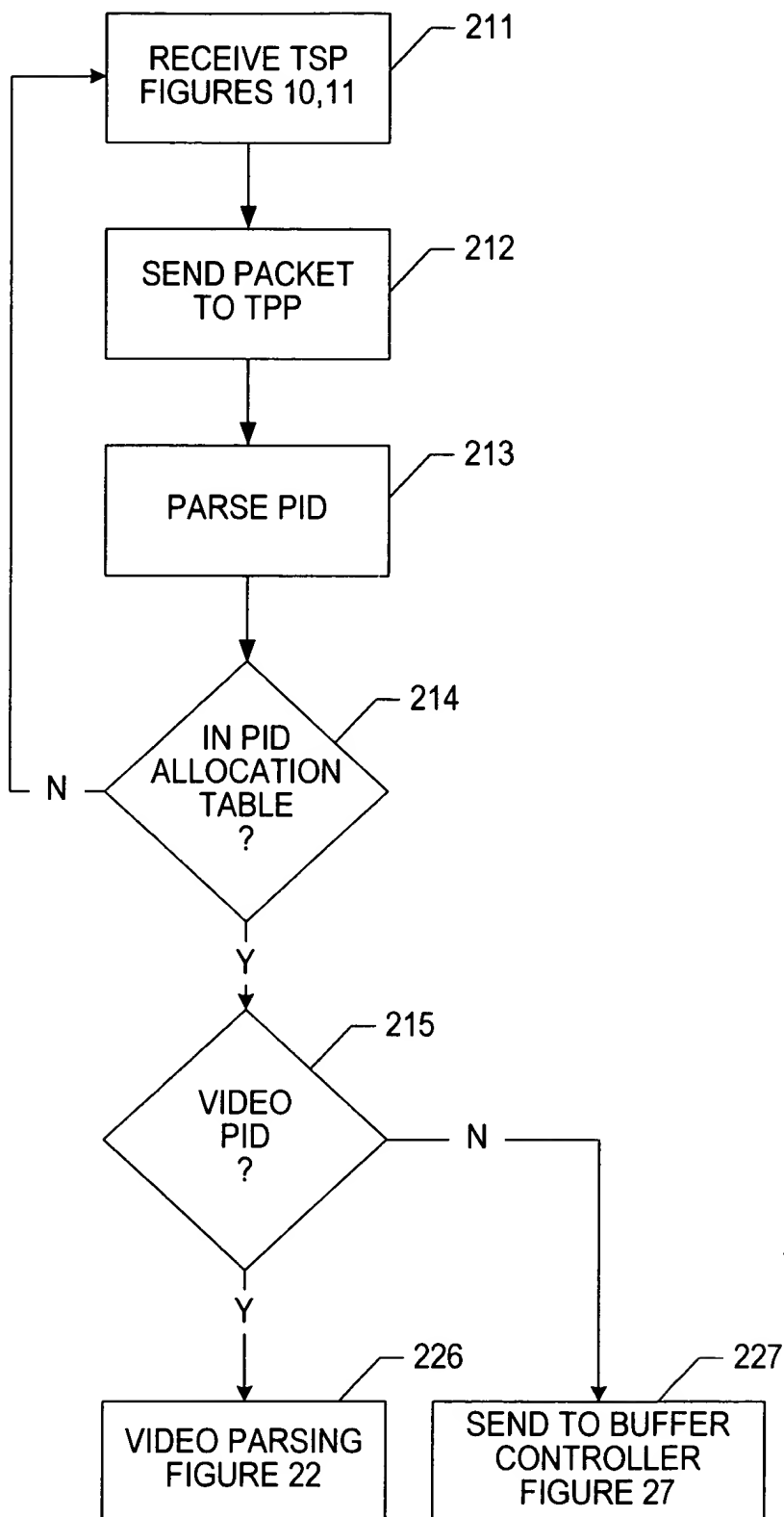
Video Control Registers			
Field Name	Bits	Len	Type
VideoPid	0-12	[13]	R/W
EnableParsing	13	[1]	R/W
StartFromPUSICommand	14	[1]	R/W
ProcessStreamID	15	[1]	R/W
StreamID	16-23	[8]	R/W

FIG. 18

Transport Demultiplexer Registers			
Field Name	Bits	Len	Type
PID_yz, 0 ≤ yz ≤ 30	0-12	[13]	R/W
EnableParsing	13	[1]	R/W
BufferIndex	14-17	[4]	R/W

FIG. 19

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**FIG. 20**



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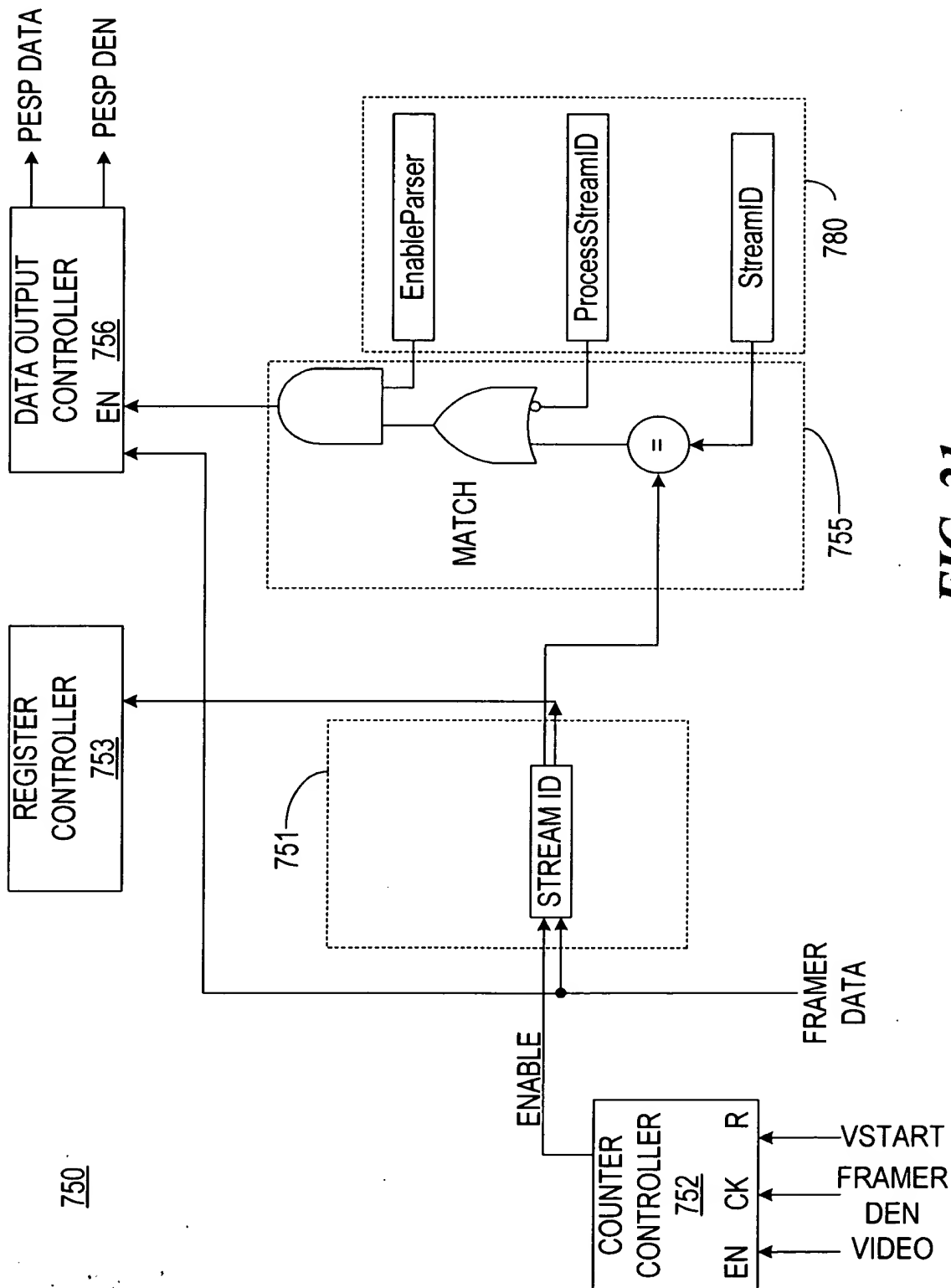
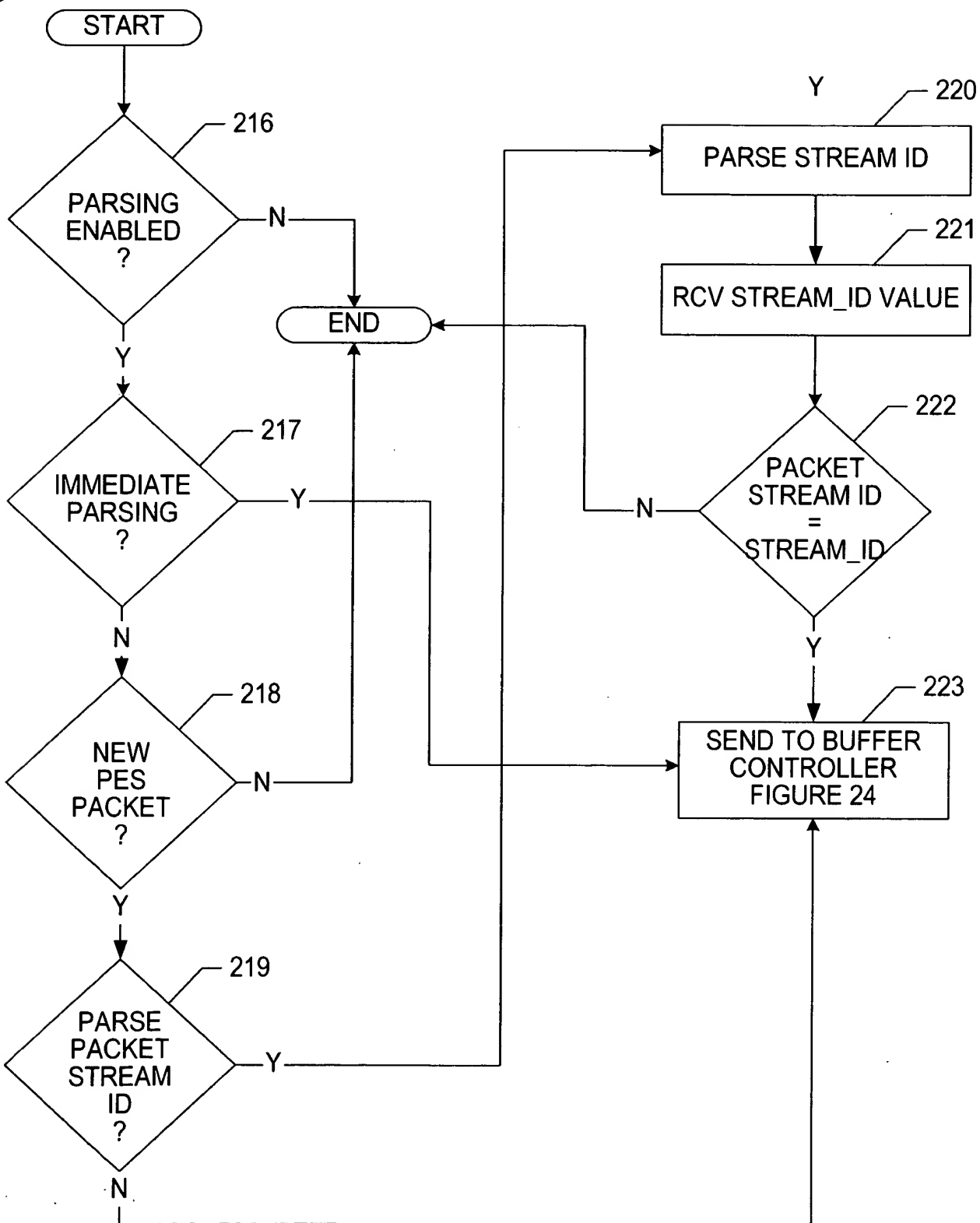
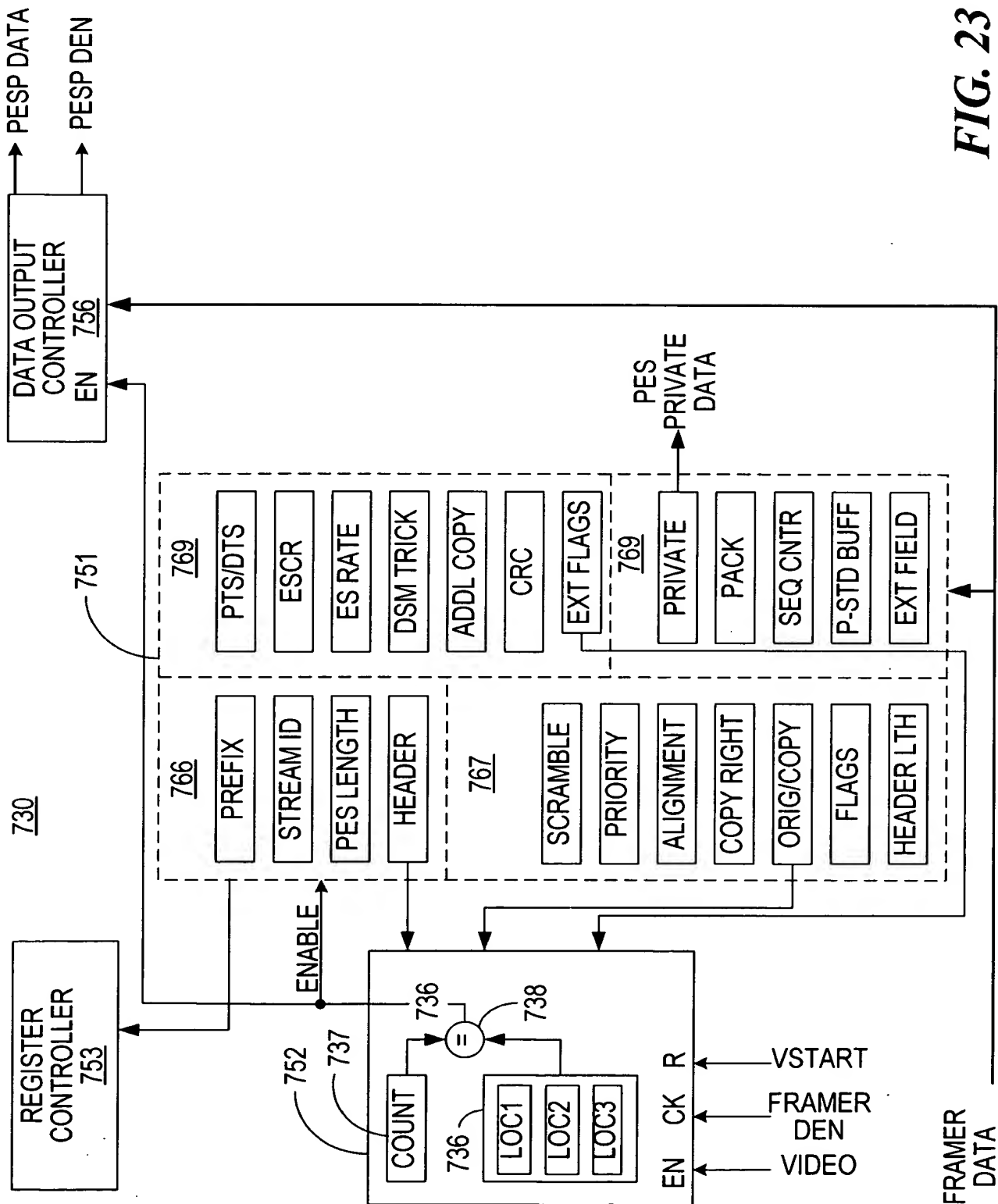


FIG. 21



**FIG. 22**



**FIG. 23**



FIG. 24

Transport Demultiplexer Global Status Register			
Field Name	Bits Len Default	Type	Description
VideoPESHeaderAvailable	12 [ 1] 0	R/W	This bit is set to '1' when the new PES header of the video stream is received. <b>WR_ACC_CLEAR.</b>
VideoPESHeaderError	13 [ 1] 0	R/W	This bit is set to '1' after an error in the PES header is found. <b>WR_ACC_CLEAR.</b>
VideoPESDataAlignment	14 [ 1] 0	R/W	This bit is set to '1' when video PID has AF data_alignment_flag, indicating a possible start of I frame. <b>WR_ACC_CLEAR.</b>
VideoPESDSMTTrickMode	15 [ 1] 0	R/W	Indicates that DSM data is found and extracted. <b>WR_ACC_CLEAR.</b>
VideoPESPrivateData	16 [ 1] 0	R/W	This bit is set to '1' when video PID has 16 bytes of private data in the PES header. <b>WR_ACC_CLEAR.</b>
VideoPESCRCErr	17 [ 1] 0	R/W	This bit is set to '1' if the video CRC of the PES parser found a CRC mismatch. <b>WR_ACC_CLEAR.</b>

FIG. 25

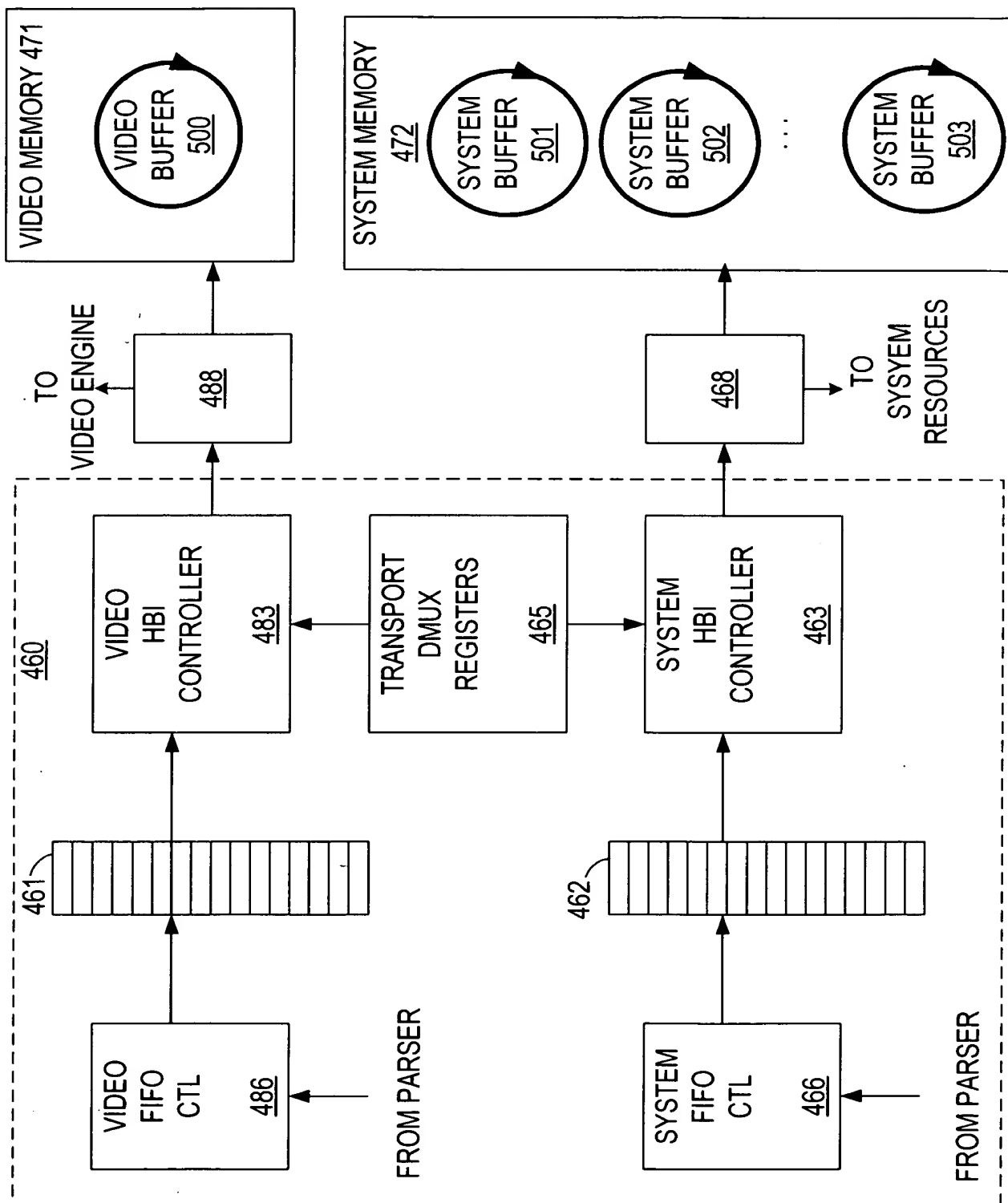
Transport Demultiplexer Interrupt Mask Register			
Field Name	Bits Len Default	Type	Description
EventInterruptMask	0-18 [19] 0	R/W	If set to '1' enables local sources Bit 12 – VideoPESHeaderAvailable Bit 13 – VideoPESHeaderError Bit 14 – VideoPESDataAlignment Bit 15 – VideoPESDSMTTrickMode Bit 16 – VideoPESPrivateData Bit 17 – VideoPESCRCErr Bit 18 – VideoPTSRReceived Bit 19 – VideoESCRReceived

REPLACEMENT  
DRAWING

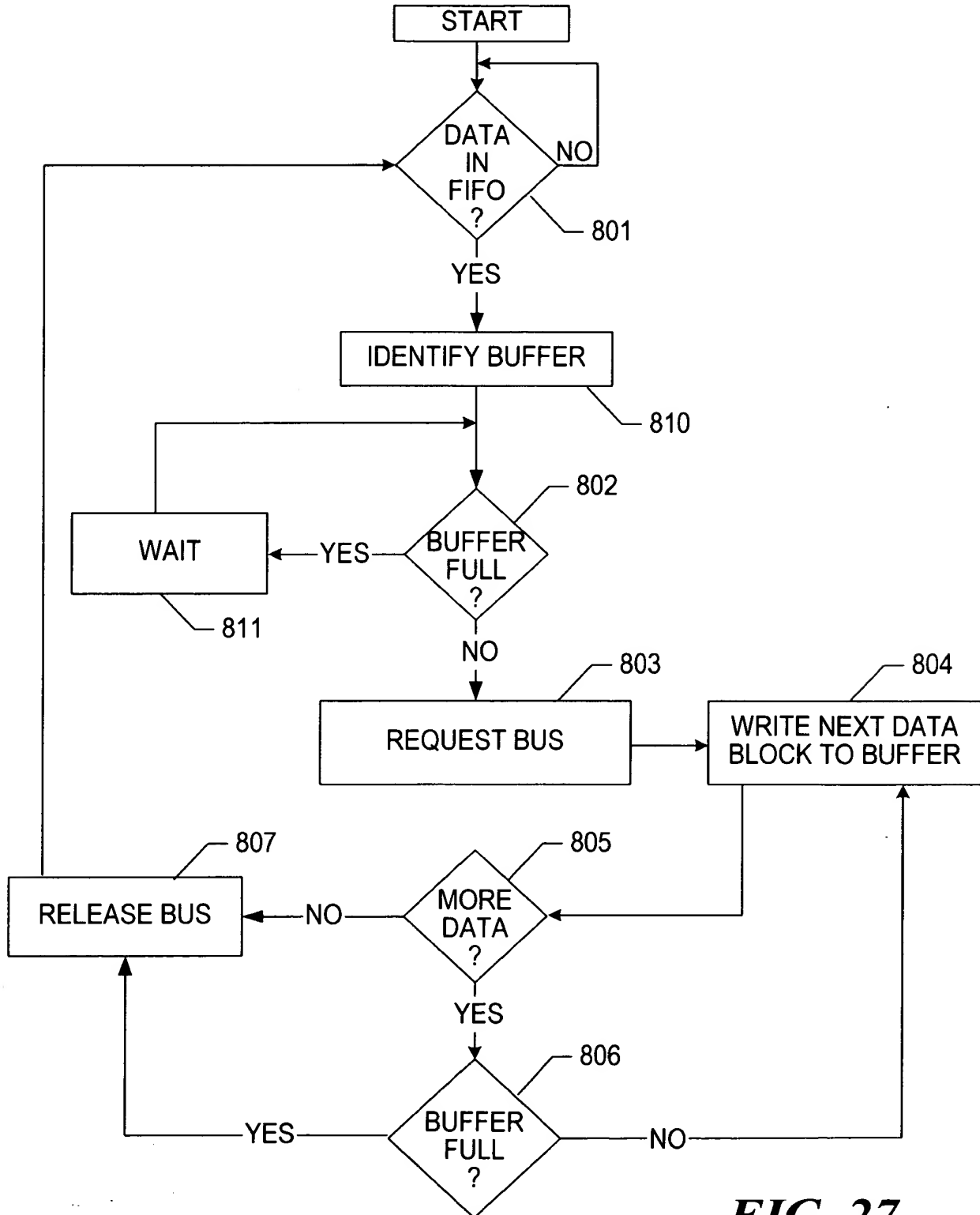
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Inventor: Branko Kovacevic et al.  
Attorney: J. Gustav Larson (512 327-5515)

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FIG. 26







**FIG. 27**

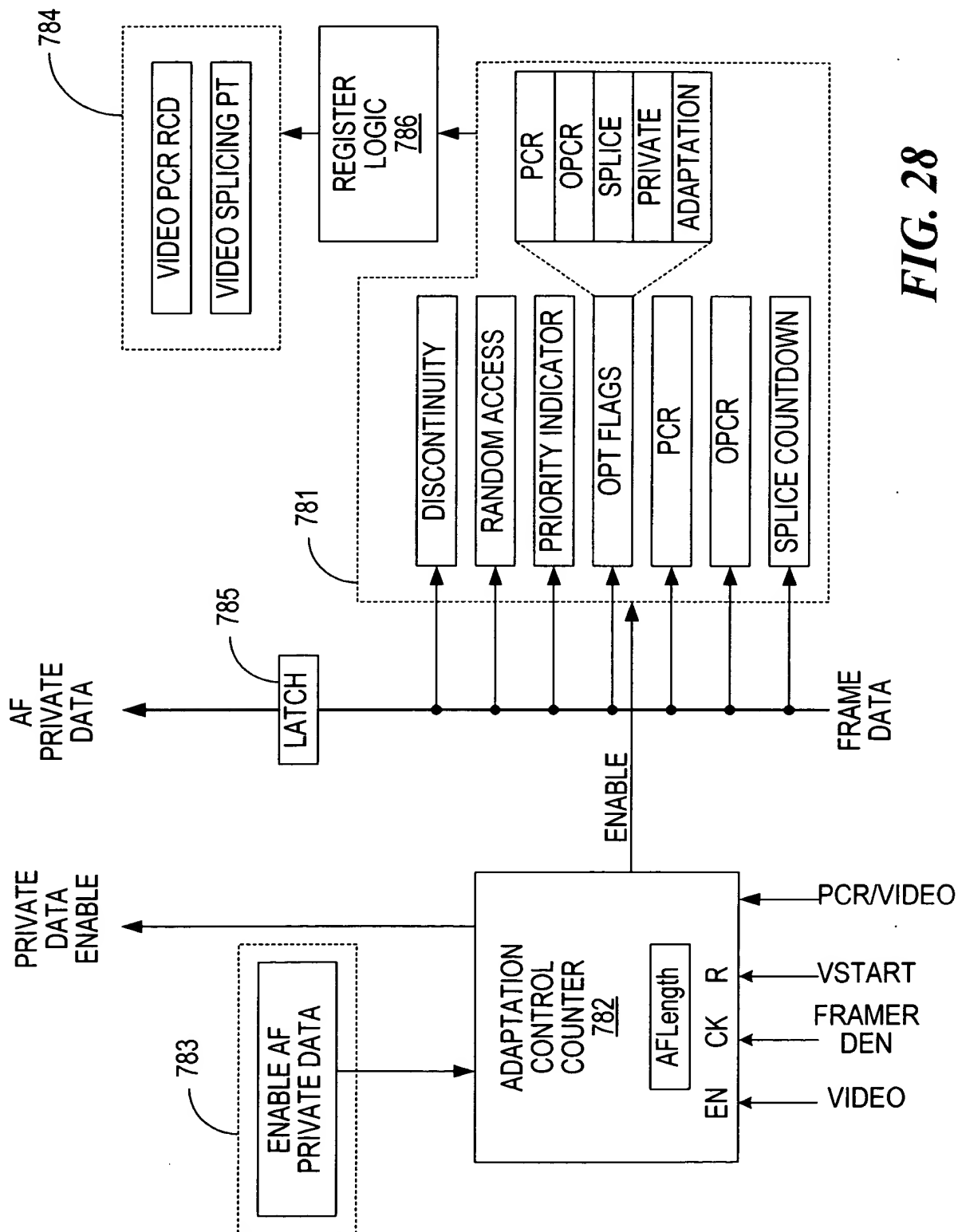


FIG. 28

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Transport Demultiplexer Global Status Register			
Field Name	Bits	Len Default	Type Description
VideoAFPcrReceived	[ 1]	0	R/W This bit is set to '1' after arrival and extraction of PCR sample in the adaptation field. <b>WR ACC CLEAR.</b>
VideoAFPcrDiscontinuity	[ 1]	0	R/W This bit is set to '1' when a <i>discontinuity_indicator</i> in The adaptation field of the PCR PID is asserted. <b>WR ACC CLEAR.</b>
VideoAFDiscontinuityFlag	[ 1]	0	R/W This bit is set to '1' after a <i>discontinuity_indicator_flag</i> has been asserted in the AF of video TP, indicating a discontinuity on continuity_counter. <b>WR ACC CLEAR.</b>
VideoAFRandomAccess	[ 1]	0	R/W This bit is set to '1' when video PID has <i>random_access_flag</i> asserted in the AF, indicating a start of the elementary stream. <b>WR ACC CLEAR.</b>
VideoAFSplicingFlag	[ 1]	0	R/W This bit is set to '1' when video PID has <i>splicing_point_flag</i> asserted in the AF, indicating approaching of the splicing point. <b>WR ACC CLEAR.</b>
VideoAFSplicingPoint	[ 1]	0	R/W This bit is set to '1' when video PID has <i>splicing_point_flag</i> asserted in the AF, after splicing point occurred ( <i>splice_countdown</i> = 0). <b>WR ACC CLEAR.</b>
VideoAFPrivateData	[ 1]	0	R/W This bit is set to '1' when video has AF private data. <b>WR ACC CLEAR.</b>
AFSpliceCountdown	[ 8]	0x00	R/W Current splice countdown value from adaptation field of A/V packets. Modified on the fly by AF content

FIG. 29



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Transport Demultiplexer Interrupt Mask Register			
Field Name	Bits	Len	Type
EventInterruptMask	0-18	[19]	0
			R/W
			If set to '1' enables local sources Bit 5 – VideoAFPcrReceived Bit 6 – VideoAFPcrDiscontinuity Bit 7 – VideoAFDiscontinuityFlag Bit 8 – VideoAFRandomAccessFlag Bit 9 – VideoAFSplicingFlag Bit 10 – VideoAFSplicingPoint Bit 11 – VideoAFPrivateData

FIG. 30

Transport Demultiplexer Global Control Register			
Field Name	Bits	Len	Type
EnableAFPrivateData	[ 1]	0	R/W
AFPrivateDataBufferIndex	[ 4]	0	R/W
PCRIndex	[ 1]	0	R/W
EnableAutoSplicing	[ 1]	0	R/W
			If '1' enables parsing and routing of AF private data
			Specifies 1 of 15 destination buffers in the system memory

FIG. 31

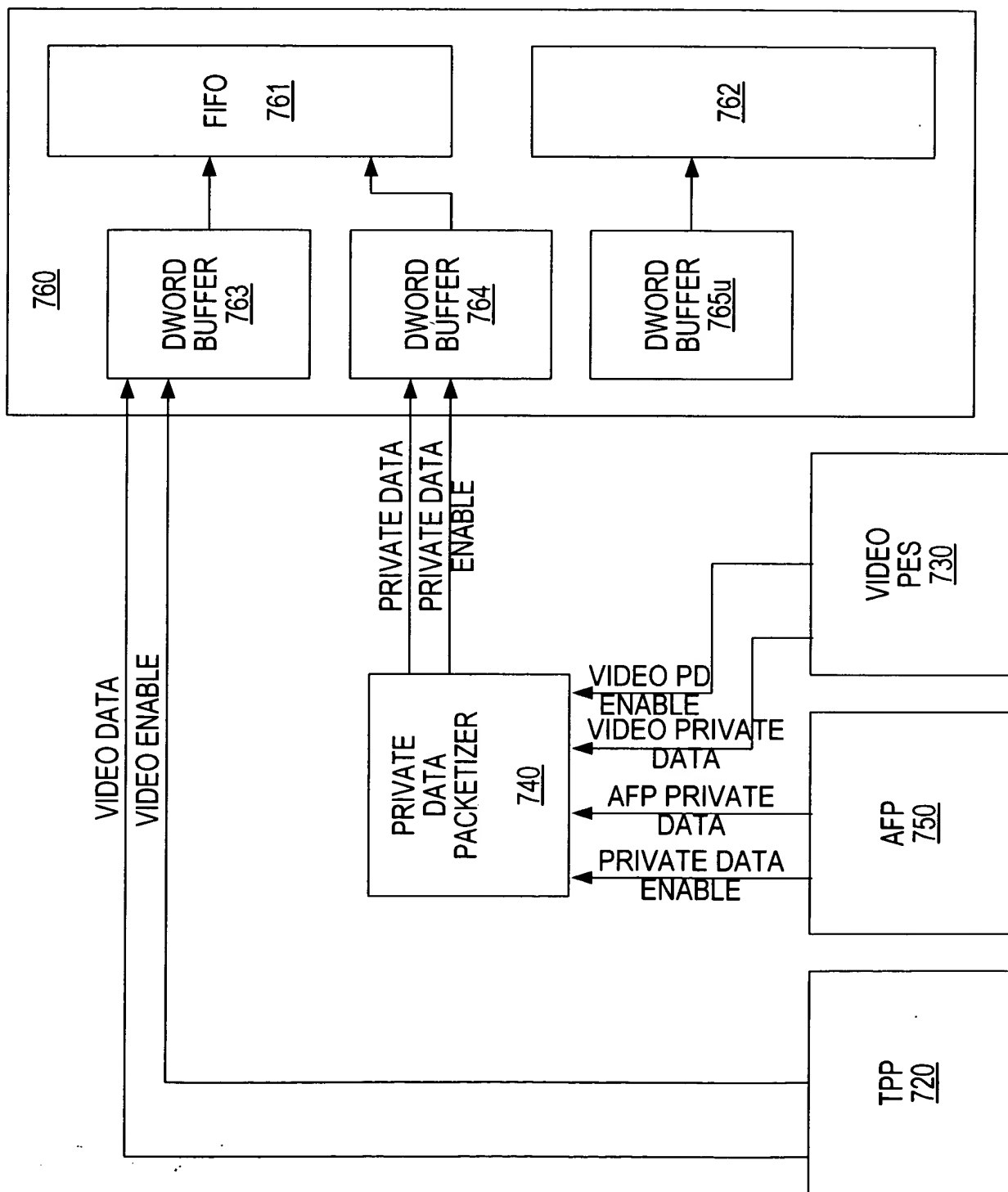
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FIG. 32



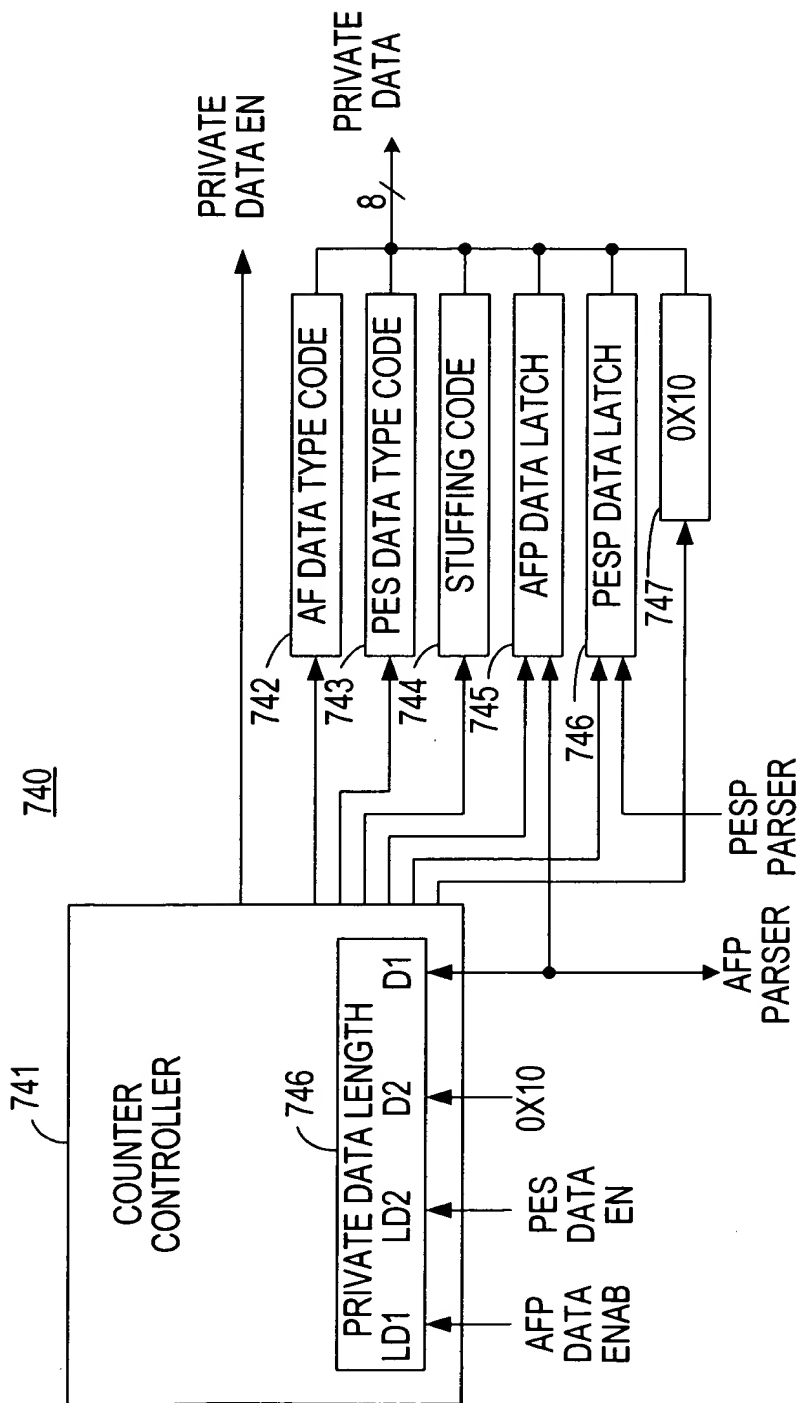


FIG. 33

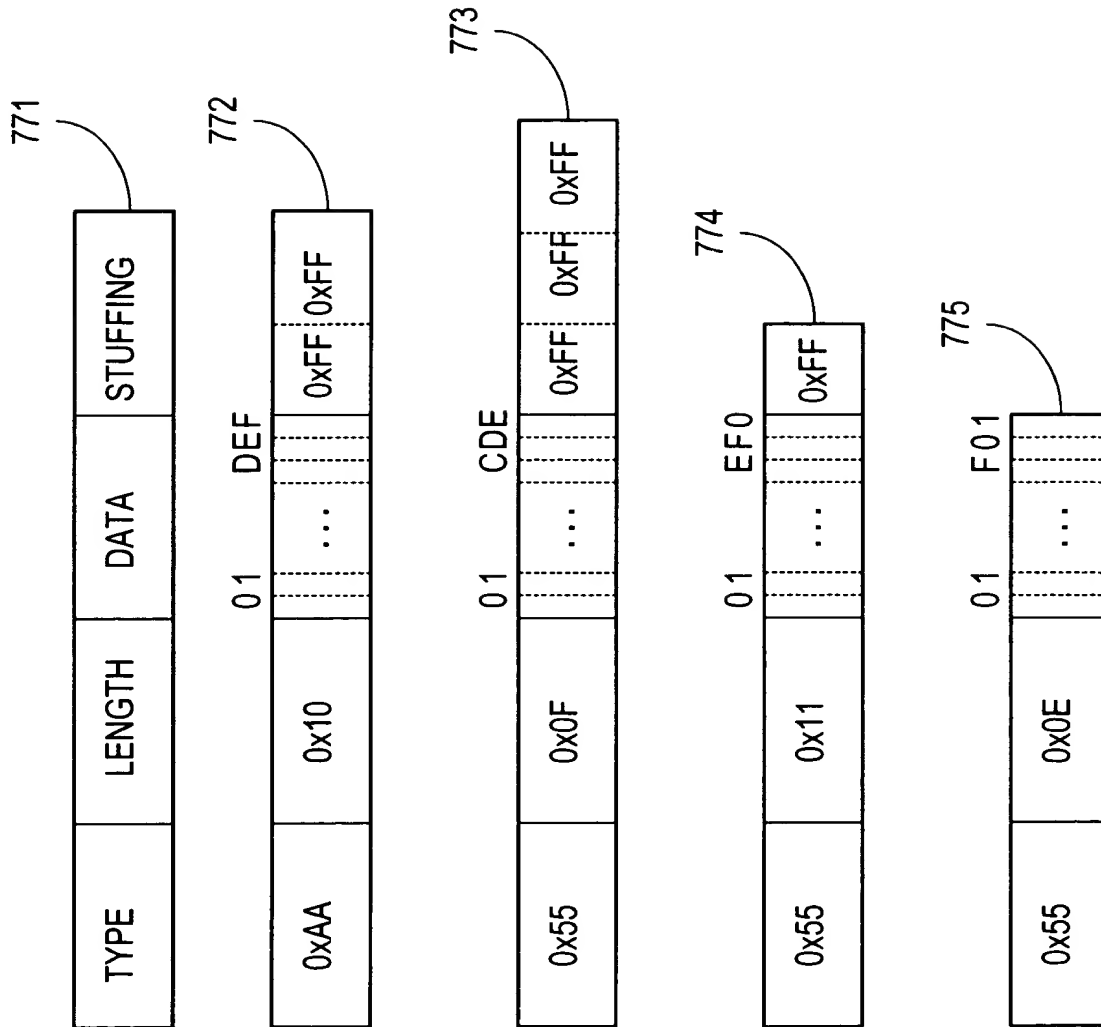
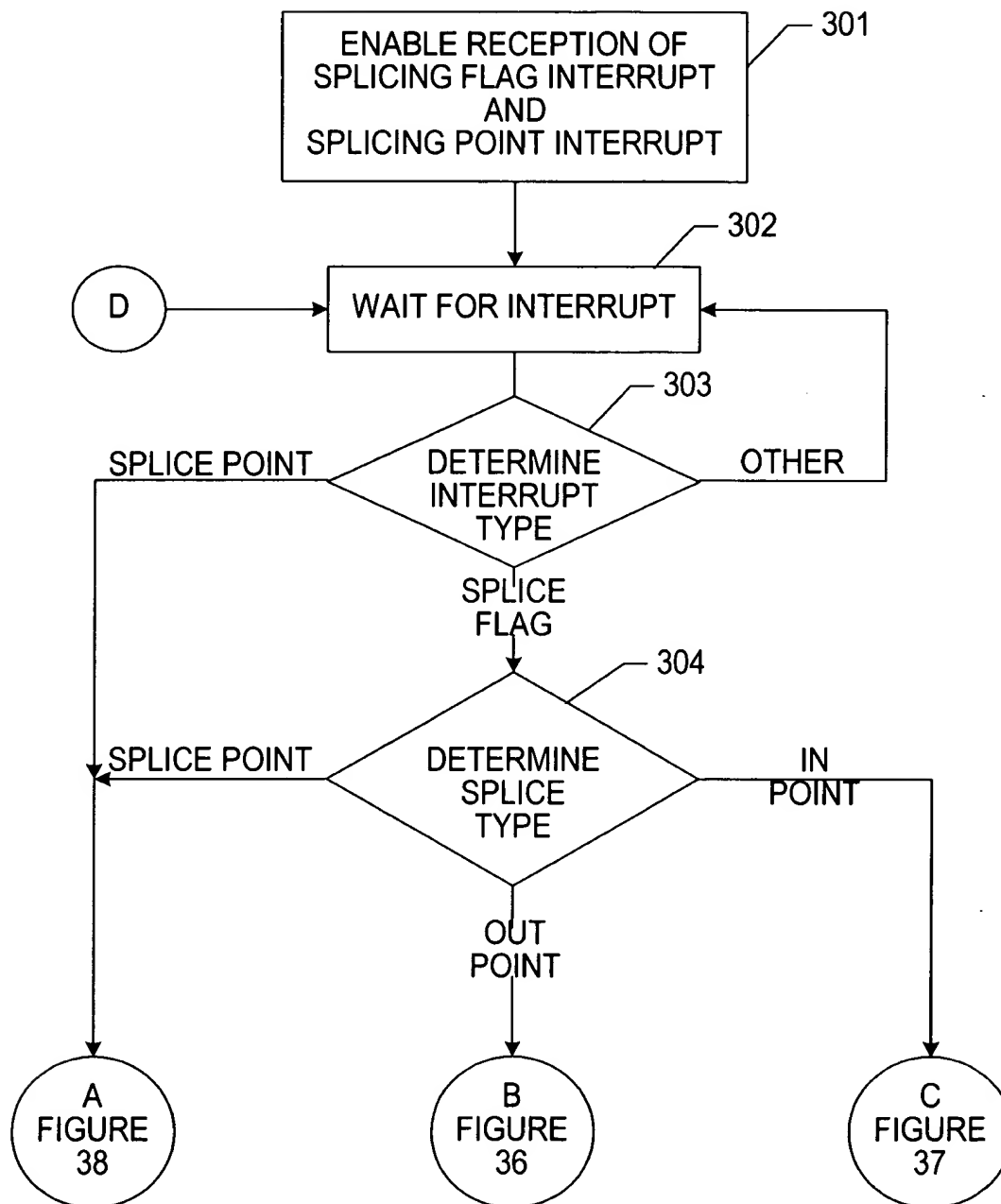


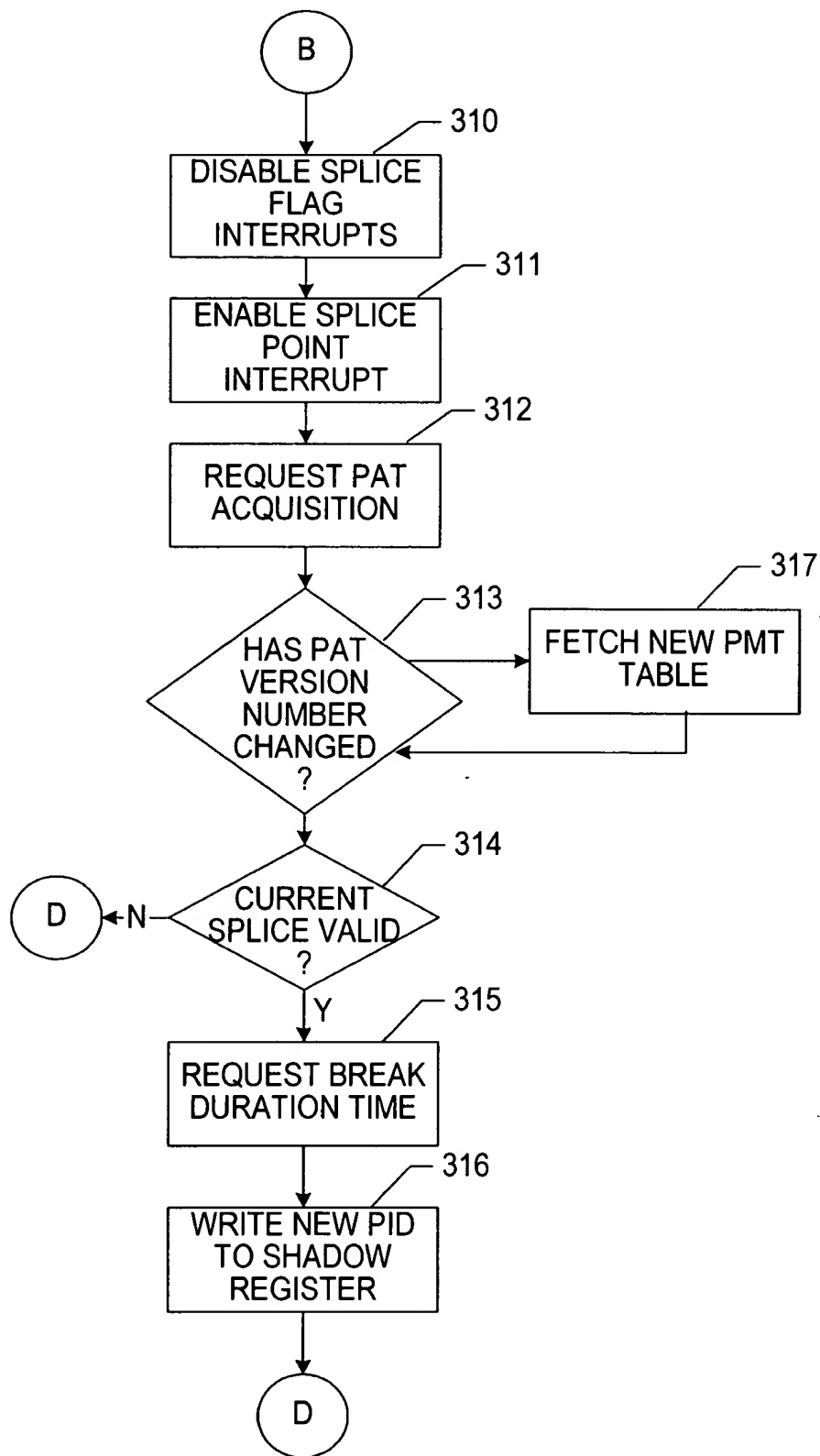
FIG. 34



**FIG. 35**

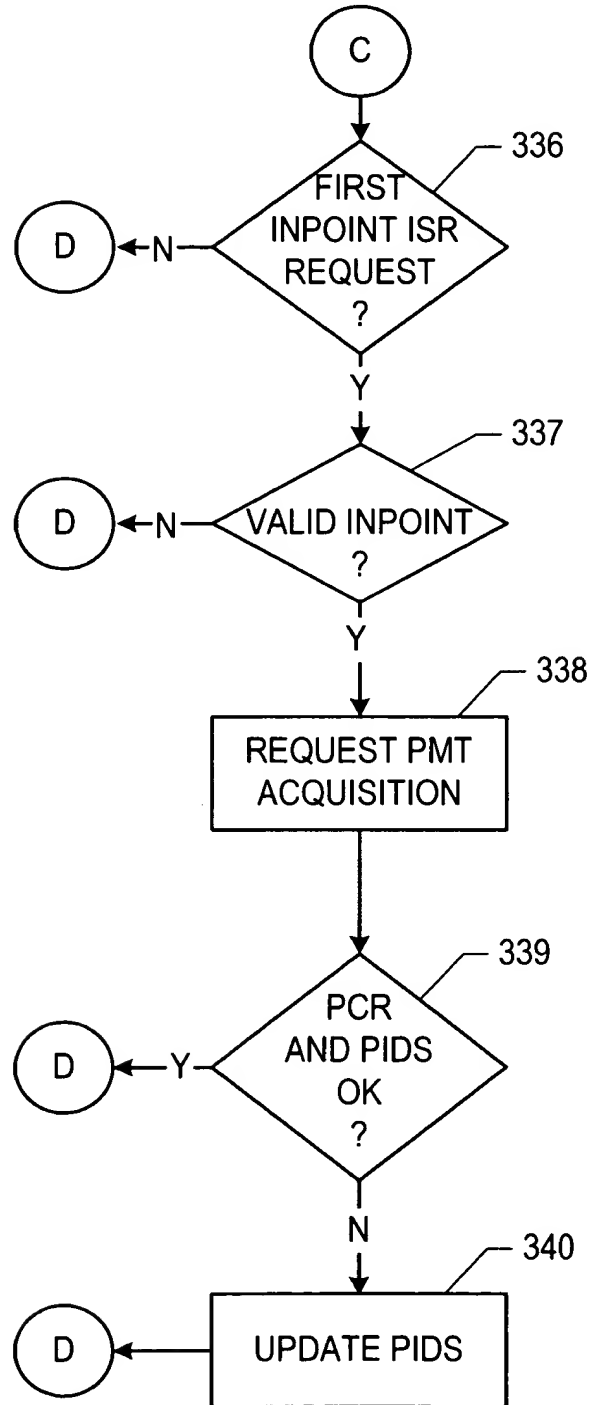


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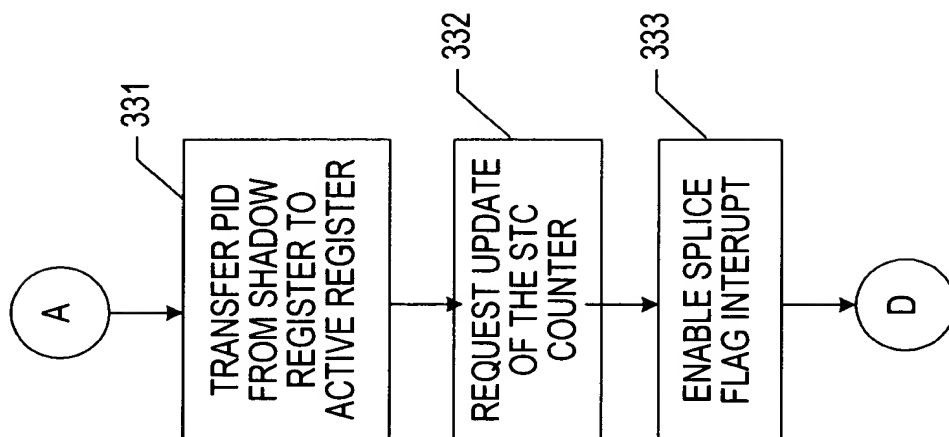


**FIG. 36**

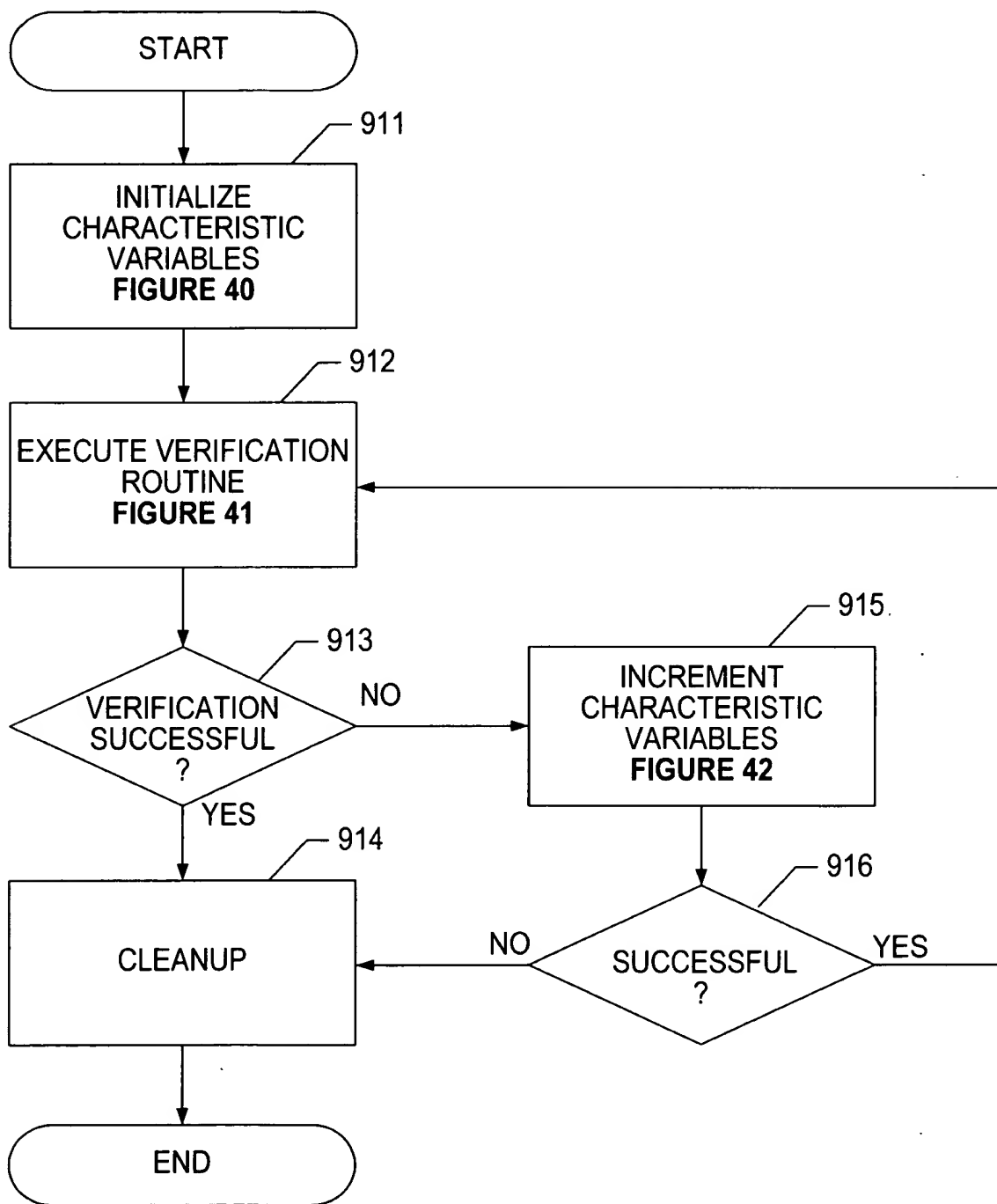
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**FIG. 37**



**FIG. 38**



**FIG. 39**

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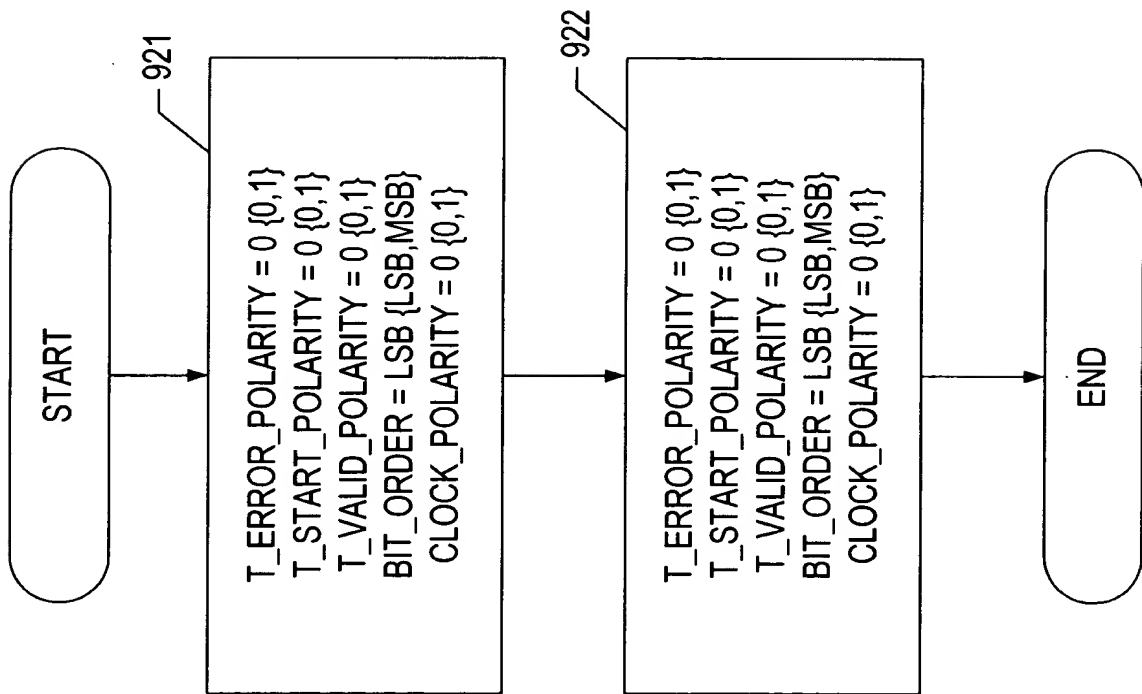
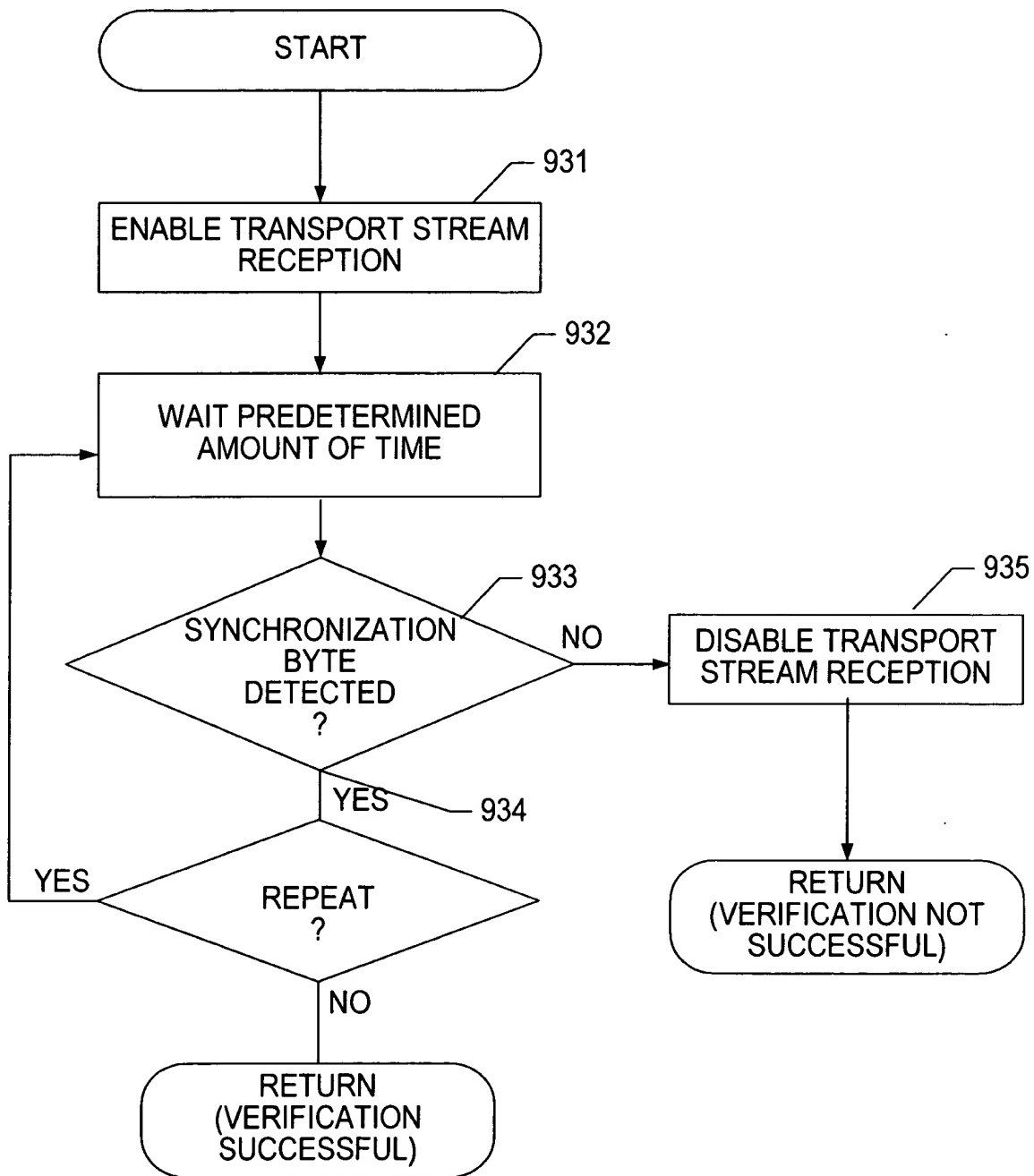
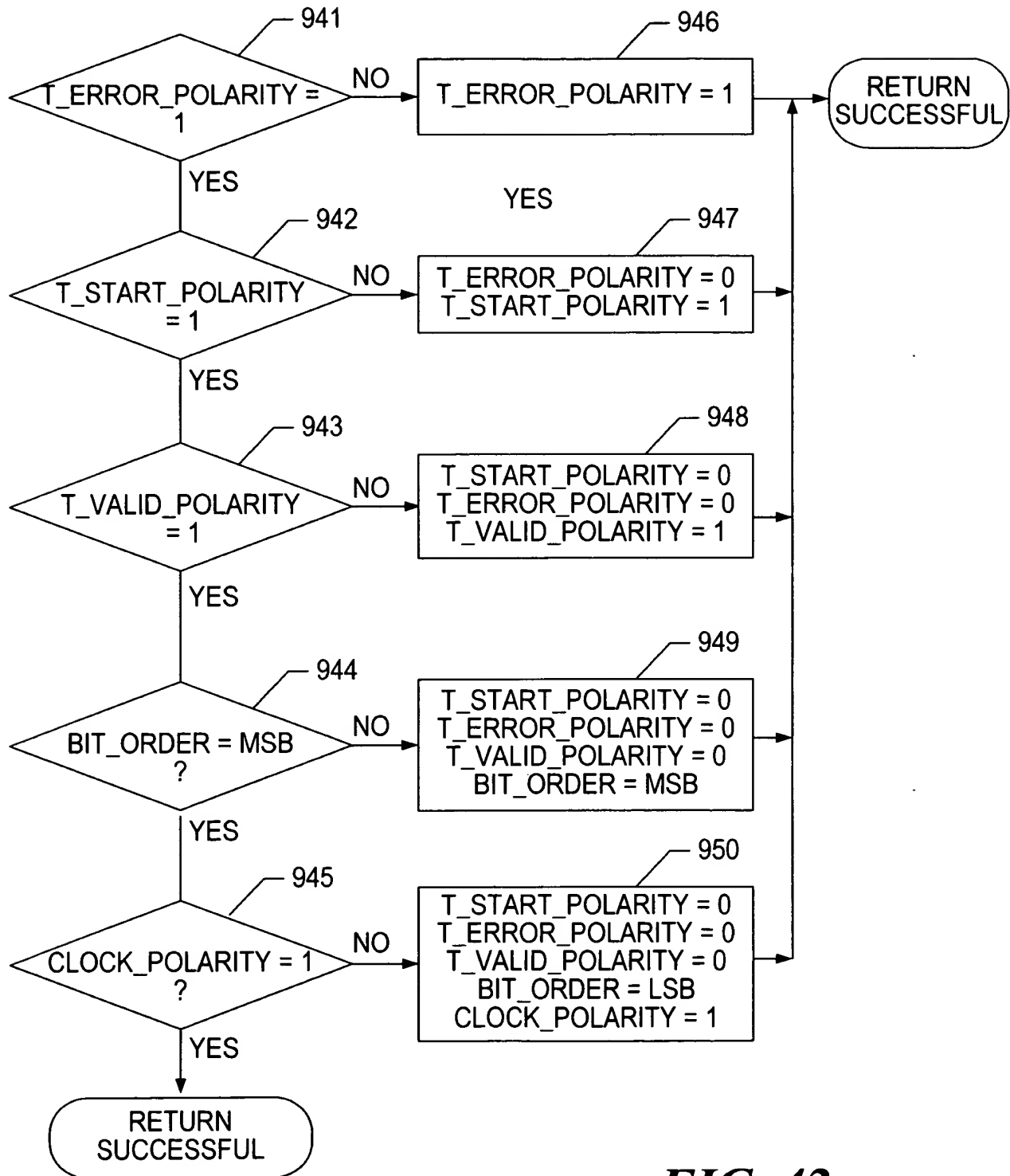


FIG. 40

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**FIG. 41**



**FIG. 42**

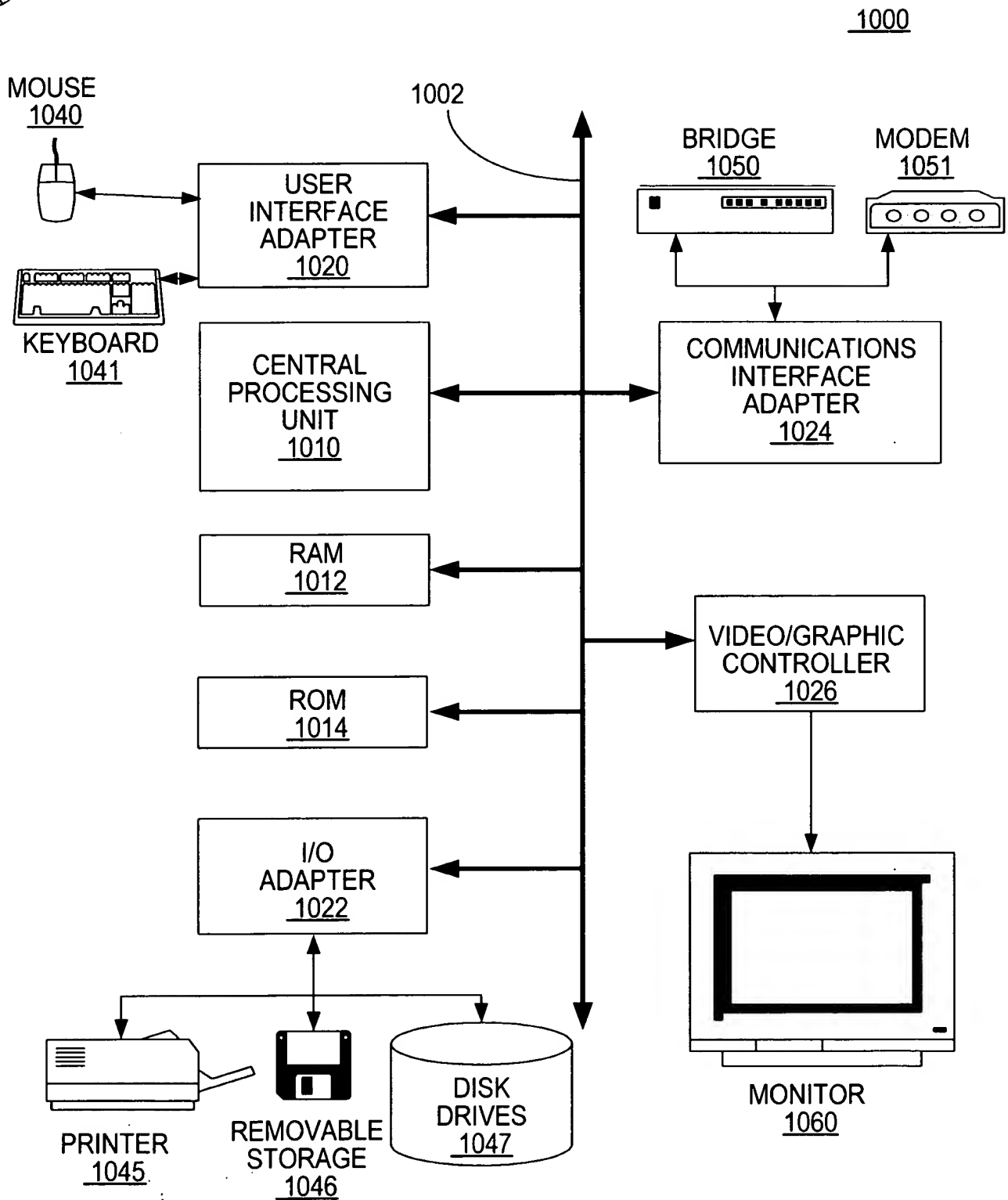


FIG. 43